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The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request

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CARL VERNON REYNOLDS, M.D.
Acting State Health Officer

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
Diphtheria	Malaria	Typhoid Fever
Don't Spit Placards	Measles	Typhoid Placards
Eyes	Pellagra	Venereal Diseases
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough
	Sanitary Privies	

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters)	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Minimum Standards of Prenatal Care	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Breast Feeding	Instructions for North Carolina Midwives.
Infant Care. The Prevention of Infantile Diarrhea	
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OUR NEW STATE HEALTH OFFICER

By THE EDITOR

DOCTOR CARL VERNON REYNOLDS of Asheville on November 10 took the oath of office and immediately assumed his duties as Acting State Health Officer, succeeding Dr. James M. Parrott, who died November 7. Doctor Reynolds was unanimously elected to the position by his fellow members on the Board.

Doctor Reynolds is a native of Asheville. His father was a successful Asheville physician who died when Doctor Reynolds was only three years old. Doctor Reynolds obtained his literary education in the private schools of Asheville and Wofford College, Spartanburg, South Carolina. He received his medical education at the College of the City of New York, graduating in medicine there in 1895. After his graduation he took a postgraduate course in London, England. Doctor Reynolds located in Asheville for the practice of medicine, specializing in pulmonary tuberculosis. His skill in combating that disease has been widely recognized by the medical profession. An example of their confidence was his election as president of the North Carolina Medical Society, in which place he served with distinction in 1920.

On beginning practice he at once became interested in health work. His first connection was with the city health department in 1896. Following that period, for more than twenty years he served as city health officer of Asheville, in which capacity he rendered his city and the whole State important and permanent service. Some of his contributions to public health may be cited, as follows:

He organized the first crusade against the common house-fly ever undertaken anywhere.

He assisted in drafting the first milk ordinance for Asheville.

He secured progressive sanitary laws.

He put through the compulsory vaccination law requisite to school attendance.

He secured the adoption of a bread-wrapping ordinance and one requiring the tuberculin testing of cows.

He saw typhoid fever drop from an average of two hundred and seventy cases a year in the city of Asheville to about five while he was city health officer, and saw smallpox practically eliminated.

We enumerate these things so that the people of the State may know they have a well-trained health officer at the head of the State Health Department—one fully worthy of confidence and support.

The State Health Department

What the State Board of Health Has To Offer To the People of North Carolina

THE chief reason for the existence of the State Health Department is that this division of government may render essential service to the citizens of the State in the protection of their health and lives. In order to meet the complexities of modern business and to render efficient service in an economical manner, in response to the demands of this great progressive State, which has been rapidly increasing in population during the past twenty years, it has been necessary to organize the work of the Board of Health into separate divisions with a responsible director at the head of each division.

In order to set forth concisely and clearly just the character and scope of the service and coöperation the State Board of Health extends to the public, the editor of *THE HEALTH BULLETIN* has asked the director of each department to prepare a statement carefully describing precisely what his department is doing, or is prepared to do, in advancing the cause of public health. We are, therefore, setting forth below a statement from each one of the division heads of the North Carolina State Board of Health. The publication of these articles should supply valuable information to the reading public, and especially to the medical profession, health officials, and other organizations, such as the women's clubs, teachers' associations, and so on.

Any individual or organization desiring additional information concerning any of the departmental activities herein described, or who wishes to avail himself of the service, may obtain additional information and a prompt response by simply writing to the State Board of Health, Raleigh, North Carolina.

ADMINISTRATIVE DIVISION

The State Health Officer and the Assistant State Health Officer are respon-

sible for the activities in this division of the work. Of course, the State Health Officer is himself the executive officer of the State Board of Health. He executes the rules and regulations, outlines the work, and gives orders to the heads of all the other departments. He assigns work of a special character to the proper department, and he receives daily, weekly, and monthly reports, as may be necessary, from each one of the division heads. In this way he keeps informed of the needs and progress of all health work throughout the State at all times. The financial affairs, or division and proration of expenditures of all the different divisions, are arranged in the administrative department. Contact with the Governor, the Budget Bureau, and other necessary departments of the State Government is made, of course, by the State Health Officer. As a member of the State and Provincial Health Officers Association of North America, the State Health Officer keeps in intimate contact with all other state boards of health in the Union and with the United States Public Health Service in Washington as well as with such outside agencies as the very important International Health Board in New York. The State Health Officer is responsible for all monies paid out by all of the divisions of the State Board of Health. The execution of all the State Health laws devolving upon the State Board of Health is regulated from the administrative division. In short, he is what his title designates, an executive officer in every sense of the word.

DIVISION OF PREVENTIVE MEDICINE

This division comprises three distinct and separate services, under the supervision of a single director: first, a department of School Health Supervision; second, a department of

Maternity and Infancy; and third, a department of Health Education.

School Health Supervision

In this department a force of eight specially trained nurses are constantly at work throughout the school year in counties having no whole-time health officers or any other form of whole-time county health work to which the State Board of Health contributes financially. There are, on an average, about fifty such counties. Most of these counties comprise the smaller or less wealthy counties of the State, although there are a few exceptions, such as Cleveland, Iredell, and other thickly populated and wealthy counties, which, up to this time, have never had any form of whole-time health service. These nurses visit every school, white and colored, in a county in which they work during the school year. They inspect the children for evidence of malnutrition, the presence of preventable disease or handicap, and teach the essential elemental principles of personal hygiene and sanitation to the school children both individually and collectively. Their work has resulted in an improved standard of health. They have been instrumental in securing the organization of a number of whole-time health departments, and they have also been instrumental in securing the treatment of many thousands of children for the removal of physical defects. They take note of the sanitary surroundings, the environment of the school; they report on whether or not the children are supplied with a safe drinking-water system and sanitary facilities for proper sewage disposal. Their work has gained in importance and effectiveness each year for many years.

Department of Maternity and Infancy

In this department an effort has been made during the years to control the midwife practice in sections of the State having no whole-time health organizations. This work has covered about fifty counties and is carried on similarly to the School Health Supervision service. The nurses devote their entire time in the summer months to an effort to strictly regu-

late the practice of midwives in such counties. During the past ten years about one-half of the midwives in the State have been eliminated, and the remaining ones have been instructed until at present, for the most part, their work is safer and more dependable. They teach the midwives in small groups, with frequent aid of the physicians in the communities. They give them brief oral examinations, and at the conclusion of work in a county they award to each midwife who meets the minimum requirements a permit, good for one year, which enables the woman to legally practice as a midwife. This regulation is effective only upon adoption by the local county board of health of an ordinance designed to regulate such practice. This ordinance is good for one year and has to be renewed annually by action of the county board of health.

In connection with this department activity, a mailing service is maintained at the State Board of Health offices in Raleigh through which any expectant mother in the State may obtain approved literature which will be helpful to her in her expectancy. It is supplemental to the work of the private physician and is in no way designed to take the place of a physician, who is always necessary to render prenatal advice. It is exceedingly helpful in cases where the family are too poor to engage a private physician, and in which they depend upon midwives for instruction and advice during the critical period of expectancy. This department also provides helpful literature in response to any requests from mothers desiring it in caring for their babies. Many thousands of mothers are assisted annually by this helpful literature.

All of this department activity is offered free to expectant mothers, to the parents of babies and small children, as well as the work for midwives and the School Health Supervision work. Funds available for this service are provided through a small annual appropriation by the Legislature.

Health Education

The responsibilities in this division

of the work are many. In this department all of the personal health correspondence service of the State Board of Health is conducted. People writing for information on various health subjects receive a reply through this division. Such things as symptoms are never described, and treatment is not recommended; but there are many forms of helpful advice which have proved of great value to the citizens of the State. All of the literature on health subjects available for the people is provided through this department. The monthly HEALTH BULLETIN, which at present goes to thirty-six thousand people, and which contains useful information, is prepared monthly and published by this department; and at present about forty special publications on various subjects are available on request—free to any citizen who needs it and writes and asks for it. The director of this division is responsible for the preparation of all of this material. He must either write it or secure its preparation by other competent officials of the Board. A mailing room is maintained through which multigraph and mimeograph material as well as the various printed publications are sent out to those citizens requesting it.

In this State, of more than three million people, it is natural to suppose that a large and increasing number of people will be constantly writing to the State Board of Health for definite information on a variety of subjects affecting the health of the people. An inconceivable number of questions on every known subject in the field of medicine and public health are received during the course of every year. Naturally a large proportion of these questions cannot be answered, but many of them can be answered with benefit to the inquirer. The keynote to this service in the replies sent out is information on how to protect the individual families from the ravages of preventable diseases. A large amount of personal advice is offered in such matters as nutrition and immunization against communicable diseases. An average of about fifteen

letters a day are sent out every working day in the year.

DIVISION OF SANITARY ENGINEERING

The Division of Sanitary Engineering renders service on all non-medical phases of sanitary and public health work. The very limited means of this division are employed along the following lines of endeavor: The promotion and maintenance of pure, adequate public water supplies; municipal sewerage facilities, and safe milk supplies; shellfish sanitation; home sanitation, including the installation of safe private water supplies, and means of excreta disposal; sanitation of State institutions, county institutions, jails, convict camps, and public schools; swimming-pool sanitation; malaria control; hotel and café sanitation, summer camp sanitation, and enforcement of a bedding law.

There are at present some 229 public water supplies in North Carolina which supply drinking water to municipalities having a total estimated population in 1935 of 1,160,000 people. The engineering department examines all plans for improvements and changes and for new waterworks and sewerage installations with special reference to public health and sanitation. When possible, routine plant inspections of water and sewage-treatment plants are made from time to time. Unfortunately, it has been impossible during the past several years to provide anything like the amount of engineering assistance that our waterworks and sewage plants deserve. Fortunately during the past two years there has been but one water-borne outbreak of a serious nature in the State. In that case raw, untreated sewage found its way into a water supply which resulted in over forty cases of typhoid and three deaths. In that instance this department had repeatedly called the dangerousness of the situation to the attention of the proper authorities, but the condition had not been remedied before the epidemic broke forth.

The object of milk sanitation is twofold. The primary object is of

course to clean up our milk supplies and make them thoroughly safe and acceptable. The second objective is to increase the use of milk and milk products. The milk consumption in North Carolina is less than half what it should be. Good health depends largely on good teeth, freedom from rickets, undernourishment, and pellagra; ability to resist infections; plenty of pep, energy, and vitality. The generous use of clean, safe milk by children, adults, and the aged as well, is vitally important for good health. Fortunately, as a city's milk supply is cleaned up we find that the milk consumption increases automatically. In this connection it is interesting to note that within the past eighteen months more improvement has been made in municipal milk supplies in North Carolina than in any similar previous period. At our present rate of improvement practically every municipality large enough to have more than one or two dairymen will soon be protected with a clean, safe Grade A raw or Grade A pasteurized milk supply. This condition and this improvement is due largely to the close coöperation of the Division of Sanitary Engineering with the Public Health Service and the local health departments. Specially prepared plans and specifications are available for North Carolina dairymen for milk houses, dairy barns, small pasteurizing plants, and other dairy structures. In this service the North Carolina State Board of Health is second to none in the country.

Through the coöperation of this department, the CWA, and FERA approximately 43,000, or 10 per cent of the North Carolina homes that had insanitary privies or no privies at all, have been provided with sanitary privies, which means at least reasonably safe means of excreta disposal. Much more remains to be done along this line. Assistance, advice, plans, and literature are furnished for such work and for protecting home water supplies, and constructing small sewage-treatment plants.

This department is able to assist engineers, architects, and others with plans for school and institutional water

supplies and sewage-treatment plants, public and private swimming pools. Likewise, much engineering assistance can be furnished in regard to mosquito and malaria control through drainage and otherwise.

The protection of the public through inspections of hotels and cafés by this department is important, but because of limited means and personnel much remains to be done in this connection.

DIVISION OF ORAL HYGIENE

The Division of Oral Hygiene has on its staff a corps of dentists both white and colored who conduct mouth health programs in the public schools of the State. The mouth health program consists of didactic teaching of mouth health. This means that the relationship of an unclean mouth to systemic disease must be explained and stressed. This didactic teaching is aided by the use of plaster models, placards and pictures, both stereopticon and motion.

If the group is first grade, then the teaching is in the form of stories in first grade language.

If it is in the science department of high school, then tooth histology is emphasized and tooth pathology is explained.

If it is in the home economics division, foods, food values and proper health habits are stressed.

In addition to this, mouth health is taught by these dentists through demonstrative or correctional work. However, the correctional work is confined insofar as possible to children who cannot have the corrections made in any other manner.

The mouths of the entire grade or grades are inspected by the dentists and the parents of those children who are not selected for demonstrative purposes are notified through the United States mail that the child is in need of dental services and should consult their regular dentist. It is understood that no child will be used for demonstrative purposes whose parent sends a written objection, nor do the school dentists refer any child to any particular dentist. They are careful to say "YOUR" dentist. That responsi-

bility of selecting a dentist rests with the parent. In no case does the school dentist make a diagnosis. That is for the family dentist to do.

Dental decay is said to be a universal disease, and it is a disease. Perhaps it is the most widespread disease known today. Tooth decay eventually means a dead tooth. A dead tooth is oftentimes a source of infection which may cause some of the many kidney and heart diseases. Tooth decay is on the increase in children. Probably the teeth and tonsils cause more infection of hearts and kidneys in children than any other source. This being true, it is necessary that mothers be informed of the great importance of the child's mouth being in a healthy condition.

Knowing the great influence that the grade teacher has in molding the thought of the child, the Division of Oral Hygiene is directing a great deal of its effort toward the training of teachers in teacher-training institutions in the fundamentals of oral hygiene, with a hope that the teacher will live health, teach health, and correlate health teachings with all of her school work. If this could be done, say this September, with every first-grade child having such a teacher, next year every second-grade child as well as first grade having a like teacher, etc., it would be just sixteen years from this September until we would have a generation of mothers who had the fundamental training in health, as the child then would be 22 years of age, which is the average age of motherhood in this State.

When all is said and done, the Division of Oral Hygiene of the State Board of Health is nothing more nor less than a health-teaching agency using visual methods of teaching.

STATE LABORATORY OF HYGIENE

The activities of the State Laboratory of Hygiene are limited almost entirely to those procedures intended to aid in the control of infectious disease in man. The work of the Laboratory may be grouped roughly into three classes:

1. Examination of specimens of water from municipal, semi-public, and private supplies;

2. Examination of specimens from patients;

3. Preparation and distribution of vaccines and serum for the protection of the citizens of North Carolina from infectious diseases.

Historically, the beginning of the Laboratory was due to the need for the examination of specimens of water, the General Assembly appropriating the sum of \$600 for this purpose in 1905. The General Assembly of 1907 increased this appropriation to \$2,000, and the late Dr. Clarence A. Shore became director of the Laboratory in December of that year, continuing in that capacity without interruption for more than twenty-five years until his untimely death occurred February 10, 1933.

During the biennium 1909 to 1911 there were 3,600 specimens of water examined in the Laboratory; during the biennium 1932-1934 there were 11,479. In the examination of specimens of water the Laboratory does not attempt to find infectious agents. It merely endeavors to determine whether or not the water is contaminated with fecal matter. It is assumed that if there is evidence of contamination it is entirely probable that sooner or later infectious agents will find their way into the water and the supply is unsafe. It is impossible to determine the value of the service which the Laboratory has rendered in the protection of the water supplies of the State; neither can an estimate be made of the number of lives that have been saved by this activity. No thinking person, however, can deny that the value of this service, either in terms of dollars or of lives, has been great.

A great many unsatisfactory samples of water are sent to the Laboratory. Many of these are due to the use of unsuitable specimen containers. The sanitary analysis of water is a delicate procedure. To insure satisfactory specimen containers, the Laboratory supplies outfits especially prepared for this use. Other unsatis-

factory specimens are due to lack of judgment in taking specimens. No specimens should be taken from a source which has not been inspected by a competent observer. If there are any visible sources of probable contamination, there is no indication for examination. Open wells, unprotected springs, and all open streams will almost invariably be contaminated. No specimen from such sources should be sent to the Laboratory. The most valuable examinations are made from specimens taken from sources which, to the trained observer, are not subjected to visible contamination.

In the examination of specimens from patients the following procedures are used: Cultures of blood, urine, feces, and bile, for typhoid bacilli and other infectious organisms; agglutination tests of blood serum for typhoid, undulant fever, Rocky Mountain spotted fever, and endemic typhus; examination of specimens of urine, both for pathogenic organisms and for evidences of kidney disease and diabetes; microscopic examinations of throat swabs for diphtheria, Vincent's angina, streptococcus infection; animal heads for rabies; blood films for malarial parasites; feces for intestinal parasites; sputum for tubercle bacilli; urethral smears for gonorrhea; spinal fluid for meningitis; serological tests for syphilis—Wassermann tests, precipitation test.

In the biennium of 1909-1911, 3,665 specimens from patients were sent to the Laboratory for examination. In 1920-1922 there were a few more than 45,000, and in 1932-1934 more than 256,000.

The following substances for the protection of man against infectious disease are prepared and distributed by the Laboratory: Typhoid vaccine, whooping-cough vaccine, smallpox vaccine, antirabic vaccine, diphtheria antitoxin, tetanus antitoxin, diphtheria toxoid, Schick test material for diphtheria susceptibility. The following substances are purchased from manufacturers and distributed by the Laboratory: Neoparsphenamine, sul-

pharsphenamine, bismuth tartrate solution, scarlet-fever antitoxin, erysipelas antitoxin, anti-meningococcus serum, and diagnostic test materials for scarlet fever.

A great many examinations are made on Sundays and holidays. Such procedure as the examination of cultures for diphtheria, blood tests for typhoid fever, animal heads for rabies, water for bacteriological examination, spinal fluid for meningitis, and all miscellaneous specimens of an urgent nature are examined as soon as they arrive at the Laboratory. However, such specimens as sputum for tubercle bacilli and specimens for intestinal parasite searchers are kept until the next regular Laboratory work day.

All positive findings of diphtheria culture and brains from rabid animals are reported by telegram collect immediately after the examination is completed, unless we are specifically requested not to do so. Regular mailed reports are made on all specimens, regardless of whether they have been reported by telegram or not. Two copies of this report are kept in our files and are so arranged that we can refer to the report either by the county of its origin or by the name of the physician sending the specimen.

Practically all reports on specimens taken from patients must be interpreted by the physician who has examined the patient. It is our policy never to report the results of these examinations to anyone except the patient's physician. Reports of positive blood cultures are most helpful to physicians in establishing a diagnosis. Reports of examinations based on immunity reactions are frequently difficult to interpret, regardless of whether they are positive or negative. The Laboratory does not attempt to make a diagnosis. It merely attempts to assist physicians in this procedure. Negative reports mean little other than that the Laboratory was unable to find the organism, or to detect immune bodies. Negative results do not necessarily mean that the patient does not have the disease suspected.

The work of the Laboratory is confined as strictly as possible to that of a public health nature. Strictly clinical examinations such as chemical analyses of blood, blood counts, etc., are not encouraged. Recently, because of limited funds, we have had to discontinue the examination of tissues. On the other hand, the Laboratory does not discourage the performance of those tests and examinations which yield information bearing on the public health. It is the policy of the State Board of Health, of which the State Laboratory of Hygiene is an integral part, in promoting the health of the people of North Carolina, to consider the Laboratory as the official agency where public health tests and examinations should rightly and properly be made.

In common with practically all other organizations and citizens of the State, the Laboratory and its staff have suffered from the depression. Much Laboratory equipment has become worn out or antiquated, while we have been unable to make replacements. The volume of work has grown without a compensating increase in personnel. True to the high ideals instilled into them by the late Doctor Shore, the members of the staff have shown great courage and commendable loyalty during this trying time. They have made every effort to render satisfactory service to the citizens of the State and to do everything in their power to protect the lives and health of the people of North Carolina.

DIVISION OF EPIDEMIOLOGY

The activities of the Division of Epidemiology are concerned primarily with the control of communicable diseases. Before any control measures can be instituted we must know when and where cases are occurring. In order that we may have this information, physicians, nurses, householders, teachers, and parents report the existence of communicable diseases to the local health officer, or to the quarantine officer in counties not having a health officer. These reports are supposed to be re-

ceived in this office within forty-eight hours after the diagnosis of any one of the thirty-two communicable diseases has been made. This information is then tabulated as to the county or city in which the case occurs, so that we have a daily report for the State as a whole, although forty-eight hours after the disease has been diagnosed.

At the end of each week certain diseases are tabulated and a telegraphic report sent to the U. S. Public Health Service in Washington, D. C. In addition to this, a weekly report of nine principal diseases, showing incidence according to counties and larger cities, is mimeographed for every health officer in the State and staff members. A monthly report giving the number of cases reported and a tabulation according to age, race, and sex, is submitted to the members of the State Board of Health. At the end of the year an annual report is made, showing the occurrence, by month, of the thirty-two diseases for each county and for eleven principal cities. In addition, this annual report contains tables showing the age distribution and the sex and race distribution of these diseases. These reports are compiled by two clerks and one stenographer. Last year 49,767 case reports were received in this office. This year there will be considerably more, due to an epidemic of measles which alone totaled over 50,000 cases.

Numerous requests for information of every kind come to us daily. Often these require considerable time to obtain, for all of them cannot be filled from our supply of printed pamphlets. An effort is made to answer every request, whether or not we are able to furnish the desired information.

We have a "Facts Series" which gives pertinent information about the more common diseases in a form which the laity can easily understand. Several pamphlets of this series have been revised recently. Each month we furnish to each county health officer a list of the tuberculosis cases

reported for his county the preceding month, so that he may follow up these cases and try to obtain adequate care either in the hospital or at home.

The Division attempts to secure immunization against diphtheria, typhoid fever, and smallpox. We cooperate with the local health departments, where there are such, and with local physicians in counties not having a health department, by furnishing to the latter the necessary advertising material and the immunizing agents without charge, as well as blanks for keeping records of the number immunized in any campaign. To the former we furnish, without charge, the necessary biologic products through the State Laboratory of Hygiene.

The Division also attempts to promote adequate treatment facilities for those individuals who are infected with the venereal diseases. We submit to the Public Health Service in Washington a monthly report of the fifty-one venereal disease clinics in this State. Our efforts toward securing adequate treatment facilities have tended to encourage a more liberal viewpoint toward these diseases, so that physicians and laymen alike will regard it as a disease that is transmissible one to another, rather than punishment for moral transgression. It is hoped that by this attitude more individuals who are infected will seek treatment, and that they will continue this treatment until a cure is effected.

A consultative service is rendered through this office upon request. Our services are also available when there occurs an outbreak of any disease, usual or unusual. There have been many such requests. The Director of the Division is scheduled for speaking engagements before civic organizations throughout the State, upon request of these organizations.

Limited personnel forbids much, if any, investigative work of a research nature. With added personnel it would be an easy matter to find problems that are well worth solving. However, this takes time and would

require the services of an extra trained physician in the department. With stimulation in an advisory and supervisory capacity by such a trained man, the local county health officers could work out problems that would be of considerable value to the local health department and to the State at large.

VITAL STATISTICS

People give value to property. The men, women, and children of North Carolina have greater value in dollars than all the acres of land, the farm products, hydro-electric power, and manufactured articles of the State. The maintenance of accurate records of vital statistics is a proper governmental function. No state can serve its people well which does not provide for the proper collection of permanent records of its vital capital. A record of the gains by birth and immigration and losses by death and emigration is of prime importance to a state, and is essential to a public health department if it is to function with the greatest degree of efficiency. It is necessary to know the cause of death, the place, and the number of the inhabitants that are dying in order that steps may be taken to diminish the losses from preventable causes. These records serve as a gauge whereby the value of the methods used in fighting diseases may be measured and those that are beneficial continued and those of no value eliminated.

The Bureau of Vital Statistics of the North Carolina State Board of Health was created by an Act of the General Assembly of 1913. This Act made the State Board of Health custodian of all records of births and deaths and its secretary State Registrar of Vital Statistics. The duties assigned to the Bureau by the General Assembly include the collection, editing, filing, and tabulation of approximately 111,000 birth and death certificates yearly.

The fundamental features of our registration system are: First, each township and each incorporated town constitutes a registration district.

Two or more of these units may be combined into one district if the State Registrar believes that this will provide a more efficient and satisfactory registration. With the consent of the State Registrar, all units of a county may be united into one district. Only in counties having a full-time health department are all districts consolidated. Second, a local registrar is appointed for each township by the chairman of the county board of commissioners of their respective counties, and the town and city registrars by the mayor. These serve for a term of four years, or at the pleasure of the State Registrar. A birth or death certificate for each person who is born or dies is recorded with the local registrar of the district in which the event takes place, within five days in case of a birth, and before burial or removal in case of a death. These certificates are forwarded to the State Board of Health monthly. Third, the doctor or midwife who attends a birth must file the certificate with the local registrar. Fourth, the undertaker, or person acting as undertaker, is responsible for filing the death certificate. In cases where no regular undertaker is employed, the member of the family or friend who purchases the casket and attends to the funeral is responsible for filing the death certificate and securing the burial permit.

The parents of children are notified when the birth certificate is received by the Bureau. These notices should be received within about three months of the birth of the child. If the parent does not receive this notice within a reasonable time, he should make inquiry to determine if the birth was reported.

To the individual, a birth certificate will furnish proof, which will be accepted in every civilized nation, of the place of birth, the time of birth, and parentage. The place of birth as recorded on the birth certificate may be used to establish citizenship or to establish residence. It is necessary in order to obtain a passport. The time of birth may be used to prove age, to

obtain admission to school, to establish the right to work, to qualify for civil service examination, to hold public office, to establish right to vote, to obtain a marriage license, to determine legal responsibility, or to prove qualification for or exemption from civil and military duty. Parentage, as stated in the birth certificate, is necessary to establish the right to inherit or bequeath property, to establish identity, to obtain settlement of insurance, to prove that parents have dependent children, to prove legitimacy, or to furnish acceptable evidence of genealogy.

Death certificates may be used by individuals to furnish evidence in court, to secure pensions or life insurance, to establish titles and right of inheritance, or to give home-seekers and immigrants a guidance in selecting safe and healthful homes.

In organizations interested in health problems and procedure, birth and death records are used to determine the magnitude of health hazards, to plan new activities, to prevent epidemics, and to evaluate procedures. Since we use these records as a yardstick for measuring our problems, it is essential that they be accurate.

A certified copy of a birth or death certificate may be secured from the Bureau of Vital Statistics by anyone who has a legitimate right to the certificate upon the payment of fifty cents to cover the cost of searching the records and making the copy. Verification of age for school or employment purposes is done without cost to the applicant. Certain vital information as to the number of births or the number of deaths in a locality from all causes or from a specific cause is furnished free upon request.

It is important, both to individuals and to health organizations, that we have complete and acceptable records of all births and deaths which occur in the State. We can only attain that objective when physicians, undertakers, midwives, registrars, and individuals do their part. If everyone who has responsibility in connection

with birth and death certificates will give the consideration to these documents which their importance deserves, we can have records which will fill the needs of individuals, and which will make health protection more effective.

WHAT THE DIVISION OF COUNTY HEALTH WORK OFFERS TO THE CITIZENS OF NORTH CAROLINA

The State Board of Health recognizes that the most important part of our public health service is that performed by the local health workers who come into daily contact with the public. The local health workers are to the State Board of Health in the battle against disease what the infantry is to the general of an army in a military campaign. County health work is the right arm of the State's attack on disease from the public health standpoint.

The Division of County Health Work is the clearing house for all matters between the local health units and the State Board of Health. The financial assistance given by the State Board of Health to local county health units is administered through the Division of County Health Work. This assistance, at present, is administered on a percentage basis of the total local health budget. This assistance is given contingent upon the employment of full-time trained personnel in the local health units. The maximum percentage allocation of the total budget is 25 per cent for a four-piece health unit, but is not to exceed \$1,500 per annum. This maximum allocation has been reduced from \$2,400 per annum to \$1,500 per annum during the past two years because of the economy program under which the State of North Carolina has been operating.

The chief functions of the Division of County Health Work are:

1. Field representative of the State Board of Health to County Health Departments in technical and administrative activities.

2. Organizes new services in counties or districts where health service is not in operation, and secures the initial appropriation to carry on such services.

3. Offers a consultative service in administrative policies.

4. Approves budgets and expenditures, and audits financial reports.

5. Aids in supplying lists of approved and competent personnel, but never selects the personnel for a health unit.

6. Reviews the character and content of health programs and evaluates the health service of these programs.

7. Acts as liaison officer between local health departments and the several Divisions of the State Board of Health, and extra State agencies.

8. The Director of County Health Work, acting for the State Health Officer, carries out such administrative, technical, and professional supervision over the personnel of Health Departments as falls within the scope of the State Board of Health; all other Division chiefs or directors, and their subordinates and technical employes, serve only as consultants on technical subjects to local health departments. Complaints relating to lack of interest, non-coöperative attitudes, and misunderstandings should be filed with the Director of County Health Work.

The services of the personnel of this Division are available at all times to the county organizations, to the county medical society, and other interested groups of citizens, to confer with them in regard to the possibilities of improving the work of existing local health departments, or the establishment of new health departments, either along county or district lines.

Measles is now spreading in sections where the people were fortunate enough to miss an epidemic last winter. Already the schools in one town have been reported closed.

The Beginning of Pre-School Clinics In North Carolina

SOMETIME ago we received the following letter from Mrs. W. N. Tillinghast, the efficient supervisor of community work at Erwin, North Carolina, for the past several years. We quote Mrs. Tillinghast's letter as follows:

"DEAR DOCTOR COOPER:

"So many of our 'dailies' are calling to mind happenings of 10, 20, or more years ago, I am wondering if it wouldn't be interesting to note in THE HEALTH BULLETIN that—

"Ten years ago (1924) the first pre-school clinic in the State was held in Duke (now Erwin?). Dr. M. L. Townsend, of the State Board of Health, was in charge of this clinic.

"I have the newspaper clipping of that date, among my most valued possessions.

"With best wishes for you, always."

We requested Mrs. Tillinghast to supply us with a copy of the news note appearing in the *News and Observer* of October 3, 1924. Mrs. Tillinghast very kindly did that, and we quote the dispatch as follows:

"PRE-SCHOOL CLINIC AT DUKE FIRST OF ITS KIND

"Duke, Oct. 3, 1924.—Forty-one children between the ages of three and six years were examined here Friday in the first pre-school clinic ever held within this State. Dr. M. L. Townsend of the State Board of Health was in charge of the clinic, and in a statement he said that the children he examined were a 'fine lot' of youngsters, all of them being without any serious physical defect.

"Other clinics of a like nature will be held in the State, according to Dr. Townsend. The purpose of the pre-

school clinic is to determine the physical fitness of children just reaching the school age of six years, and to determine whether the visible defects could be remedied."

With reference to the above interesting communications from Mrs. Tillinghast as to the first pre-school clinic held in North Carolina, so far as we know this was the first designated pre-school clinic. Anyhow, it has never been denied. If there is any record in the State of any other community having held a pre-school clinic previous to this time, we would be pleased to receive information about it. Of course, all of us are aware that for at least twenty years there have been conducted in various sections of the State what those of us who were pioneer whole-time health officers in the State were pleased to term summer round-ups. These efforts were practically the same thing, but the procedure had not been systematized and did not include as many variations as the present arrangements for pre-school clinics.

Sayings of Upton G. Wilson In Reidsville Review

Willie Winkus, of Nubbin Ridge, notes from time to time agitation here and there against the employment of married women in industry and the professions. He takes the other side in the controversy. If married women could not hold jobs, he says, thousands of husbands would starve, and being a kind-hearted man, he is opposed to that.

Pellagra deaths increased in North Carolina in 1933, the first time an increase has been recorded since 1930. People should remember that pellagra is a preventable disease.

North Carolina Emergency Nursery School Program

By MRS. MARY G. SCARBOROUGH

State Supervisor of Nursery Schools and Parent Education

READERS of THE BULLETIN will be interested to learn of the organization of the plan for Parent Education through the Emergency Nursery Schools that are being opened all over the State of North Carolina. Many of these readers know of schools that are being run in their immediate vicinity; and it will be a source of interest to them to know that these are not independent centers for the care of underprivileged runabouts and toddlers, but are a definite part of a nation-wide program for raising the level of parenthood knowledge, especially among the less favored portion of our population.

The plan in brief is this: Wherever a group of thirty underprivileged children can be gathered together from relief families and enrolled, application may be made for an Emergency Nursery School. The initiative must be taken by the local community, which must see to it that suitable housing facilities, playgrounds, heat, water, etc., are furnished. Specifications may be obtained explaining just what these must be, so that there may be no misunderstanding.

The children must be between two and five years old, though a few five-year-olds may be admitted. An essential part of the scheme is the requirement that parents of nursery school children *must* attend classes in Parent Education. If they refuse, their children will have to be withdrawn. Salaries will be furnished for a head teacher, an assistant teacher, and a trained nurse, by the North Carolina Emergency Relief Administration.

What should be of especial interest to those who read THE BULLETIN is the fact that health education of the parents of these underprivileged children is to be the keynote of the whole work.

Recognizing that physical and mental and emotional health are the most essential possessions for any child, and that unless his parents have some conception of the laws governing health and illness he will have a pretty slim chance of growing up with a sound mind in a sound body, a reading course is being prepared for the teachers of these schools, stressing health in all its phases.

A very strict supervision is being exercised over the nursery schools, in order that the purpose for which they are formed may not be lost sight of. Only fifty are being commissioned to start with, in order that the growth may be sound and along the right lines. Just as rapidly as these can be organized and placed on a basis that will allow them to go ahead without constant direction, others will be established, so that before long a very large part of the underprivileged of the State will be reached. As it is estimated that each school of thirty children will directly contact at least one hundred persons, it will be seen at once that the plan possesses great powers for good.

Naturally the instruction given the little ones will not be along lines of "book larnin'." as at this age any such attempt would defeat itself. Instead, the emphasis will be upon right health habits, right ways of playing, right methods of getting along with other children and with adults. Their health training will be the indirect "learning by doing," which the psychologists tell us is the very best way for anyone to learn. The opportunities for improving the health of the population of this grand old Commonwealth of ours are practically unlimited; and thoughtful observers will watch this phase of the New Deal with high hopes of what it may accomplish.

IN MEMORIAM

By G. M. COOPER

THE death of DR. JAMES M. PARROTT, State Health Officer of North Carolina, occurred on Wednesday evening, November 7, 1934. Doctor Parrott had been health officer of North Carolina for a little more than three years. He was so active mentally and so near and dear to his coworkers here at the office that to me, even yet, it seems impossible and unbelievable to think that he is dead. Nearly thirty years ago I "took" the State Board examination for license to practice medicine. He was a member of that board. From then on I looked on him as one of the big men in the medical profession. He held every office within the gift of his profession and loved it and served its interest with a passionate devotion.

He took over the direction of the work of the State Board of Health in one of the darkest hours in the history of the Board. He brought to the affairs of the Board a new kind of leadership, a fresh outlook, a new viewpoint, and a breadth of vision which served notice on the world that the Board had a resourceful and able executive in charge. Although he came to the Board work without previous experience in an administrative capacity of this type, and knowing little or nothing of the practical workings of a modern public health organization, his chief contribution, which will be duly recorded in the history of this period, to the cause of public health advancement was his stand for the professionalization of public health work.

Before he had been here sixty days, he realized that all department divisions as well as all county health offices should be manned by physicians technically trained and experienced in public health work. It became necessary for him to oppose the ambitions of some of his lifelong friends in the medical profession, which hurt him; but it may be said to his credit that he stood four-square for competently trained men as public health officials.

On assuming office, he realized that he had some very unpleasant duties confronting him in reorganizing the work of the Board. He soon demonstrated that he had convictions and the courage to back them up. When he laid down his armor for the great adventure, he left an organization of his own building functioning at top speed. He proved to his fellow workers here that he was tolerant to everything but laziness and lying and inefficiency. Being a man of clean personal life, and governed in all his actions by a strict sense of honor, he naturally expected such qualities in his staff and other subordinates.

For the past year he struggled against the malady which finally ended his life, and at the same time he felt keenly his official responsibility. He knew all during that last year that, in justice to himself and his family, he should resign and be relieved of the extra tax on his failing strength. On the other hand, he felt that his work was not quite done. He saw many essential features of public health work sacrificed to a program of questionable economy. He did not question the good intentions of the Governor, the Budget Bureau, nor the Legislature, but he felt that the time had come to put an end to the further needless sacrifice of human life for the lack of intelligent preventive efforts. He had a conviction that the incoming General Assembly would see eye to eye with him. He was ready to submit a program of far-reaching importance to the people of the State. It could not be. His big brain is forever inactive. His profound knowledge of the public health needs of the people is left for his successor to acquire for himself.

No man could build for himself a better monument than Doctor PARROTT did in the record of worth-while work well done. In his death the State loses an honest public servant, and I lose a warm and understanding friend whose confidence was more precious to me than the riches of Araby.

MR. JNO. G. BEARD,
CHAPEL HILL, N. C.



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THOMAS E. ANDERSON, M.D.



Doctor Anderson served continuously as an active member of the State Board of Health from the time of his election by the State Medical Society, May 24, 1905, until the Board was reorganized by the General Assembly of 1931—exactly 26 years of faithful service, during which time he collected to himself many warm friends. At 77 he is now living in retirement at his home in Statesville. While he suffers from many bodily infirmities, his mind is as keen as ever and The Health Bulletin has no more interested reader than he is. The Editor of The Bulletin has been helped over more than one weary difficulty during the past few years by Doctor Anderson's friendly encouragement.

May the Boatman be a long time coming, Doctor Anderson.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
Diphtheria	Malaria	Typhoid Fever
Don't Spit Placards	Measles	Typhoid Placards
Eyes	Pellagra	Veneral Diseases
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough
	Sanitary Privies	

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine	5 to 6 months; 7, 8, and 9 months; 10,
monthly letters)	11, and 12 months; 1 year to 19 months;
Minimum Standards of Prenatal Care	19 months to 2 years.
Breast Feeding	Diet List: 9 to 12 months; 12 to 15
Infant Care. The Prevention of	months; 15 to 24 months; 2 to 3
Infantile Diarrhea.	years; 3 to 6 years.
Table of Heights and Weights	Instructions for North Carolina Midwives.

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Notes and Comment

By THE EDITOR

THESE lines are being penned about one hour after the Editor saw a child, about six years of age, hit by an automobile on one of the streets of Raleigh. The account may be written in composure, because reports from the hospital state that the child did not die, but is getting along very well.

Briefly described, this particular accident happened in the following manner: An automobile, running along about three hundred yards ahead of ours on one of the streets of Raleigh which is much traveled, struck a child who ran out from behind one of the large city street sweepers parked by the curb. The child dashed out just in front of the automobile, making it impossible for the driver to stop before hitting the child. The driver of the car did everything humanly possible; kept his head, and acted with instant precision. The car was not running at an excessive rate of speed, but the impact of the heavy automobile against a fifty-pound child, even though the brakes were slammed on just about the time the child was struck, hit the child with sufficient force to knock him probably twenty feet.

By the time we arrived on the scene the motorist had stopped his car about two lengths ahead of where it hit the child, the action of the brakes turning the car straight across the street. He had alighted, had the child in his arms, put it into the back seat of the automobile, was back at his wheel, and a woman spectator on the sidewalk got

in with him, and they were on their way to the hospital.

It was a completely unnerving sight to witness how quickly an accident can happen when everything in the world seems to be going along all right. The driver of the automobile was driving along soberly and at legal speed, intent about his business, and in the twinkling of an eye a serious accident had happened. If the child had died, the coroner would have held an inquest, or probably visited the scene, questioned the witnesses, and decided that an inquest was not necessary, writing it down as one more "unavoidable" accident.

But the question must arise sooner or later as to just what is an unavoidable accident, to be settled in the negative if the continually increasing accidents on the highways resulting in death to so many people do not cease. In the first place, this accident was avoidable in two ways. First, the child was old enough to know better than to dash out into the open road, even from an open sidewalk, let alone from behind the obstruction of the street sweeper. In the second place, the parents of every child should instill into it, from the moment it is able to walk, the danger of traffic on the highway. It is agreed by everybody concerned that a six-year-old child is thoughtless. It is intent on its play or its own business, which is just as important in its own mind as the business of any adult; but it must be taught to think before acting when its life may be at stake. In the

third place, the motorist—although in this case a gentleman, carefully operating his car—could have veered a little more to the left, giving a wider space between his own car and the street sweeper; and he could have slowed down at a much lower speed than he was going, either of which actions would have prevented the accident.

Children everywhere — on the streets of every town, in the city, and on the country roads—are notoriously careless. Some of them deliberately play in the street and seem to do everything they can to dare the motorist to hit them. Driving an auto through the average streets, particularly near intersections or in meeting traffic, is getting to be a nerve-exacting occupation. It is becoming more and more hazardous for every operator of an automobile. On the other hand, all of us see all too often in our driving along the roads or streets the careless motorist, who seems to go faster as he approaches an intersection or a parked car by the roadside, taking no thought whatever of the dangers to himself and the children or other pedestrians who may be assembled by the roadside or on the curb. If every motorist would adopt the rigid policy of slowing his car down on passing a parked car, unless he can see completely under the body of the car or all around it and definitely know there is no likelihood of a child accidentally running out in front of him, accidents of this kind could be reduced to zero. It is well enough for all thinking people to consider these questions in practical detail.

It is the small items, such as noted in the foregoing, which will change our unfavorable position of being one of the leaders in murder on the highways to a position in which we could soon be known as one of the safer of the states in which to motor. Education by the usual methods is a long and tedious process. We have mastered or we are on the way to mastery of such killers of past generations as typhoid fever, smallpox, and other diseases; therefore it

ought not to be expecting too much that common sense and care should prevail in the matter of operation of automobiles on the streets and highways of the State.

* * *

UPTON G. WILSON, writing in the *Reidsville Review* sometime ago, quotes the *Christian Science Monitor*, which told the story of a dairyman who complained to a friend of the poor outlook in the milk business. When the dairyman made his complaint, he failed to get any sympathy from his friend. The reason, as told by the *Monitor* and passed along by Mr. Wilson, was that the friend had lately passed the dairyman's place, and there on his silo, in great glowing letters, was a beer advertisement. Of course, the friend refused to waste any sympathy on any such a dairyman. The friend thought that if the man had no more foresight than to advertise the business of his keenest and most unscrupulous competitor, he did not deserve the sympathy of anybody.

Mr. Wilson comments further:

"Both beer and hard liquor are competitors of milk. Thousands spend for beer and liquor the money they should spend for milk. Moreover, farmers are among the number guilty of such unwise spending. When farmers learn to patronize more liberally those industries which consume in quantity their own products, they'll become more prosperous as a class. And they shouldn't forget that cows use more hay and grain than brewers and distillers."

The Editor of THE HEALTH BULLETIN is in entire accord with the position assumed in the foregoing by Mr. Wilson and the Boston paper. We have all heard of the meanest man in the world, but this man that Mr. Wilson and the Boston paper describe we think is the world's biggest fool. The old toper who needs a chaser for his hard liquor, and therefore eulogizes beer for its food value, in order to provide an alibi for the situation he finds himself in, deserves little sympathy. The family who is rearing growing children, but pro-

ceeds, as some of them are reported to do, to reduce the milk ration in the family in order to provide funds for increasing the beer, particularly for father, is robbing the children of the family of one of the most essential foods, a food for which there is no substitute whatever for growing children. The head of a family who will do this is foolish; but he is in no way any such fool as the dairyman who is trying to make a living selling milk to his fellows for their good, and for his own, and then undertakes to advertise the products of a brewery, which will reduce his business and eventually destroy it if the beer-drinking habit becomes prevalent enough.

There may be some food value in beer. We do not know. Impartial, unbiased chemists say that the food value in a quart of beer cannot be more than one-half the food value in a quart of milk. Moreover, the quart of milk possesses a great many exceedingly important vitamin and mineral elements which are conducive to good health, none of which a quart of beer will contain. But the beer has enough alcohol in it to bring them back for more and more.

* * *

SOMETIME ago it became necessary to tabulate, by counties, the number of deaths occurring in North Carolina in 1932 in which the decedents were without the attendance of physicians at the time of their last illness and at death. These figures afford material for some straight thinking on the part of the people of this State. In that year 31,000 people died; 4,617 of them, or almost exactly 15 per cent, were without pain-relieving drugs and other comforts provided by a practicing physician during the fatal illness or accident which resulted in death. Every county in the State recorded five or more such deaths. Alleghany had the fewest, with 5; Davie was next, with 7; Polk, Clay, and Alexander came next, with 8 each; and Graham, Camden, and

Chowan tied, with 11 each. The following named counties reported more than 100 deaths each: Buncombe, 158; Columbus, 127; Edgecombe, 137; Forsyth, 171; Guilford, 118; Halifax, 163; Mecklenburg, 104; New Hanover, 118; Pitt, 106; Robeson, 103; Wake, 159; Wilson, 163.

The foregoing figures indicate that there are entirely too many people in North Carolina who are frequently ill and who do not have the benefit of medical care and hospital service during serious illness. Of course, not a few of the deaths were sudden, from such causes as apoplectic strokes, heart disease, and other conditions; and many of them, of course, were due to accidents happening, without warning, in which death was instantaneous. But if all such deaths were accounted for, there would still be a large number which follow days of illness unattended by physicians.

Putting Economic Limitations Around Pellagra

One of the strangest angles of the late lamented depression has been the decrease in the number of cases of pellagra. Since the ailment is recognized as a "poverty" disease, its incipience in inverse ratio to the spread of poverty is very peculiar.

Lessons of the depression perhaps will teach medical science to cease attributing pellagra to poverty, but rather to assign it more definite economic limitations.

Pellagra, it seems, thrives on a condition which encourages artificial eating.

Prosperity, when it enables the household to buy and eat red meats and green vegetables, effectively banishes the spectre of pellagra.

But so also does poverty when it becomes so abject that it forces the family to live on the Spartan but scientifically correct rations dished out by relief canteens. — *Fayetteville Observer*.

More About Mouth Health

Some Pertinent Facts and Important Advice for Parents

By ERNEST A. BRANCH, D.D.S., *Director, Division of Oral Hygiene*

(This is the second of a series of articles by Dr. Branch. Others will follow.—EDITOR'S NOTE.)

SOMETIME ago the Mouth Health Survey was taken as the subject for a radio talk. Those of you who have children will doubtless remember that this survey was conducted in the public schools of the State on February 20 and 22, 1934, by members of the North Carolina dental profession, and had for its chief objective the obtaining of an accurate cross-section of the mouth health conditions and needs actually existing among our school children.

At the time the talk was made it was impossible to give the findings. However, the vast amount of information obtained in the survey has now been tabulated, and your attention is called to some of the outstanding items.

Out of 705 schools, containing approximately 325,000 school children, 130,385 children had never visited a dentist. Why? Out of this same number, 18,352 six-year molars had been lost. Again why?

During these days of depression, or following the days of depression (if you prefer), we have come to blame almost everything upon poverty. We say that people are too poor to visit the dentist and the physician, yet in this survey a careful check was kept upon the financial classification of the children inspected and it was found that less than one-third of the children were classed as indigent or unable to pay for any dental work. Taking this fact into consideration, it seems hardly possible that poverty would account for the appalling number of children who have never been in a dental office. It is too easy to blame everything on poverty, and too final.

The trouble seems to be that few parents are aware of the importance of the first teeth to the child's mouth and health. They have a tendency to look upon the first, or deciduous,

teeth as "temporary teeth," and refuse to be concerned over their condition, thinking that it is only a matter of a few years until these teeth are lost and the permanent ones take their place. They do not understand that the first teeth have a definite purpose; they do not understand that the first teeth must be kept in good condition, must be filled and cleaned and cared for just as though the child were to keep them through all his life, for upon the condition of the first teeth depends the condition of the permanent teeth, and the first teeth must be kept until they are shed naturally to make way for the permanent teeth.

Long before the baby is born, his first teeth are forming in his jaws, and by the time of his birth they are almost entirely formed beneath the gums. However, during the first months of life the baby eats nothing but milk and has no need for teeth to help him chew. As he grows bigger he needs other foods in his diet and he needs more exercise for his jaws in order that they may grow with him. Along about this time comes the first of all his teeth, and with it the hard breads. As his need of additional food increases, so also increases his equipment for masticating his food. But it is too early to fill the baby mouth with grown-up teeth. The jaws have not reached the development which is necessary. One by one, and sometimes two by two, the teeth come through the gums until the baby has his full set of twenty teeth; then one by one they go out again to make room for the thirty-two permanent teeth. This procedure covers a period of about eighteen years and seems to be unnecessarily lengthy until one considers the fact that these teeth are to last throughout a lifetime. It would be too much to

expect to build anything in a day or two which would not only have to be beautiful, but would also have to stand all the strains of everyday life.

Now about the fifth or sixth year of the child's life four teeth begin to come into his mouth—the six-year molars. These are the first permanent teeth and are of vital importance. They do not follow the loss of baby teeth; a place has been left for them all the time. If the first teeth are prematurely shed before these molars come in, then the molars may come in crooked and the other permanent teeth which follow them will be crooked too.

It is easy to locate this six-year molar in the child's mouth; it does not require a dentist to find it. If an imaginary line is drawn between the two big teeth in front and six teeth are counted on either side, upper and lower, right and left, these teeth will be found. In other words, if the child has only five teeth, counting from this imaginary line, then he has not cut his first permanent tooth. If there are six, then this sixth tooth will be the first permanent tooth in the child's head.

Even though it is easy for the mother to find these six-year molars, it is necessary for the dentist to look them over as they come into the child's mouth. They are far back in the mouth and are not as easily cleaned as the other teeth. They are also more subject to decay. Every little cavity should be filled as soon as it appears. If small cavities are neglected, they will grow into large ones and the whole tooth may be lost because of neglect.

Perhaps there is not a mother alive who would willingly neglect her own child. Purposeful neglect is not in a mother's nature. Nevertheless, neglect has the same effect, whether or not it is intentional. A six-year molar may be lost just as easily because the mother failed to understand its importance as because she did not care. Every mother should take her child to the dentist at regular intervals as soon as his first teeth appear. The dentist will tell her what foods are necessary to

build strong teeth; he will tell her that the jaws need exercise in order to develop properly (to facilitate this exercise, the dentist often recommends the chewing of gum); he will emphasize the proper cleaning of the teeth, and he will do what is necessary in the way of corrections.

However, the dentist cannot do it all. He must often waste valuable time in overcoming the child's fear of him, when this is definitely the mother's responsibility. Here again it is up to the mother to see to it that her child has the proper attitude towards the dentist. Whether she has held the dentist over the child's head as a sort of "boogie-man," or whether he has acquired the wrong attitude through listening to harrowing tales of the tooth that his Cousin John had pulled, or those that his Aunt Elizabeth had filled, unless he is taught to regard the dentist as his friend he will look upon him as the most disagreeable of all human beings. When tooth-aches and gumboils at last make it imperative to take him to the dentist he is likely to be a very intractable patient. It is too much to expect a child to submit gracefully to what he thinks will be a very unpleasant experience. Self-preservation is the first law of nature, and you can be very sure that he will fight back. If such a visit is hard on the child it is equally hard on the mother and the dentist; yet, with a small amount of preparation, it might so easily be avoided. A matter-of-fact attitude on the part of the mother will do much to create the same attitude on the part of the child. A trip to the dentist holds few terrors for the child who has been properly and wisely prepared.

In conclusion, the mother should not be satisfied to excuse herself by thinking that she wants her child to have the best. She must make it her business to find out what the child needs and then see that he gets it in spite of all the depressions that may befall. Expensive clothes and toys may be beyond reach, but adequate dental care is available to most of us, and every child should have it.

Food Poisoning

By W. P. RICHARDSON, M.D., *Assistant Director, State Laboratory of Hygiene*

ALTHOUGH the term "food poisoning" is indefinite and unsatisfactory from a scientific standpoint, it was chosen as the title of this paper because it denotes to the average individual the group of conditions it is purposed to discuss. The term as here used may be defined to include all those diseases, the main mode of transmission of which is through food and food products. Poisoning from poisonous plants, as mushrooms, milk sickness caused by drinking the milk of cows which have fed on the plant, white snakeroot, and shellfish poisoning, rightfully belong under this head, but they are conditions which are not of major importance from a public health standpoint, and will not be discussed here. Bacillary and amebic dysentery and typhoid fever are sometimes transmitted through the agency of food, but such transmission is only one part of the picture of these diseases, and they will not be discussed in more detail.

The first, and perhaps the most widespread, disease in this group is that commonly and erroneously referred to as ptomaine poisoning. It got this name from the old conception that it was caused by poisonous products called ptomaines, which are formed during the putrefaction of proteins. It has been determined, however, that such products are not significantly harmful in the amounts in which they occur in spoiled food, and that most cases of so-called ptomaine poisoning are really infections with some one of several species of germs or bacteria, the most common of which are closely related to the typhoid bacillus. This finding explains why food that is spoiled is frequently eaten without harmful effect, whereas foods that are perfectly normal in appearance, odor, and taste are frequently implicated.

Outbreaks of so-called ptomaine poisoning caused by contamination of

food with infectious organisms is extremely common. As would be expected, the number of people involved in any outbreak are usually limited, because the majority of individual preparations of foods usually serve only a limited group, often only a family; but outbreaks involving large numbers of people have been recorded, and special care should be taken in the preparation of foods for large gatherings such as picnics and the like.

The symptoms are so familiar as to need little elaboration. They include vomiting, diarrhea, prostration, and fever, coming on in from four to twelve or more hours after eating the offending food. As a rule, practically every individual eating this food is affected, though the severity of the symptoms may show wide variations, both on account of individual variations in resistance and because different persons may take in different numbers of bacteria.

Several species of bacteria may cause these infections, the symptoms with all types being reasonably uniform. As has been mentioned, the bacteria most commonly found are related to the typhoid bacillus, belonging to the group of paratyphoid organisms. Several members of this group have been isolated from various outbreaks. Other bacteria have been found also, including varieties of the common pus-forming organisms, staphylococci and streptococci.

Of greater interest to the non-medical person than the bacteria involved are the foods which may be carriers of infection, and the way they become contaminated. Most types of food may carry the infection, but epidemics are usually caused by prepared foods which are kept for some little time before use. Since the number of bacteria taken in plays a considerable part in determining whether infection will occur, and its severity, this time in-

terval is important, as are the conditions under which the food is kept, particularly the quality of refrigeration and the opportunity for contamination from rats. Foods served hot immediately after cooking are probably never involved. The following products have been proved to be bearers of infection in various epidemics: all kinds of cold salads, pastries, pies, eclairs, and cakes, canned food in tins, processed and fresh meats, and raw fruits and vegetables. It will be seen from this list that the kind of food is not as important as opportunity for contamination to occur and for infection to multiply in the food, such as may occur in improperly prepared and kept foods. It should be emphasized that these cases of food poisoning should not be labeled according to the food which happens to be involved. The old practice of calling them meat poisoning, milk poisoning, etc., can only confuse the picture and make more difficult the recognition of the infectious nature of the disease.

Infection is transmitted to the food in different ways. Occasionally a person who is just taking or recovering from the disease, or one who has recovered, but still harbors the germ, is the source from which the food becomes contaminated. Rats harbor some of the bacteria of this group and form an important source of infection; perhaps the most important. A few epidemics have occurred from foods becoming infected from rat virus which was put out to destroy the rats.

These facts suggest a few points to be kept in mind regarding foods not to be eaten hot immediately after cooking:

1. The importance of strictly fresh meats, poultry, and sea foods. This means primarily adequate refrigeration before purchase.

2. Early consumption of prepared foods or good refrigeration in the home.

3. Protection of stored food from contamination by rats—a much more common occurrence than is often thought.

4. Boiling of home-canned fruits and vegetables for fifteen minutes.

5. Inspection of bought canned food, and rejection of any with ends of the can bulging. It might be stated that the high temperatures at which commercially canned products are processed has practically eliminated the danger from this source.

The all too frequent occurrence of food infections suggests further the need of more rigid inspection and control of food handling and processing establishments, especially as regards sanitation and rat infestation.

The second disease of the food-poisoning group is one not so common in North Carolina, but concerning which we need to know a few facts. It is called botulism, a name derived from the fact that in Germany, where it was first recognized, it is commonly gotten from eating infected sausages. In the United States, canned vegetables are most often the source.

Botulism is a true poisoning, the symptoms being caused by a poison produced by *Bacillus botulinus* in the food before it is eaten. So far as is known, the bacillus causes no trouble when it is swallowed. The *Bacillus botulinus* is an organism which grows only in the absence of air, and that is the reason canned foods have been of such importance in its causation. It does not grow in the presence of high concentrations of sugar, so that is the reason fruits and preserves are not often involved. As has been stated, commercially canned products are processed at a high temperature which makes them extremely safe. Some years ago, commercial products were involved in a good many outbreaks, but at the present time, although poisoning from commercially canned food is not impossible, most of the trouble comes from home-canned vegetables. This is because it is not possible as a rule to get a high enough temperature in home canning to kill the very resistant *botulinus bacillus*.

It is of interest to note that practically all animals are susceptible to

botulism, and its occurrence in nature is not unknown. Stock sometimes get it from forage preserved in silos, and wild ducks have been known to have it. Limberneck in chickens is nothing but botulism.

In contrast to the symptoms of food infection, the symptoms of botulism do not relate to the stomach or intestines. Botulism involves the nerves and muscles, causing weakness and paralysis, first of the eye muscles, resulting in "cross-eye" and difficulty in seeing, then of the muscles of the mouth and throat resulting in difficulty in swallowing, and then to a lesser extent of all the muscles. The mortality rate is very high, but when a patient recovers, he recovers completely.

There are two types of botulinus bacilli commonly involved in human botulism, and the poisons, although they cause identical symptoms, are different. Antitoxins have been produced which are of considerable help in treatment if administered early, but the type of antitoxin must correspond to the type of organism causing the disease.

Botulinus toxin may be present in a food without giving any signs at all, though commonly there is some suggestion that it is a little off color. The toxin is destroyed by thorough heating, so vegetables cooked well after opening will not give any trouble. The boiling of all home-canned foods for fifteen to twenty minutes before eating them will practically eliminate any danger of botulism.

To summarize briefly: So-called ptomaine poisoning is really an infectious disease caused by some one of several species of "germs" or bacteria, and this conception should not be confused by classifying cases of the disease according to the foods which happened to carry the infection. Precautions to prevent this disease include insistence on fresh meats, poultry, and sea foods, early consumption or adequate refrigeration in the home, and the boiling of home-canned foods after opening and before use.

Botulism is a poisoning or intoxication caused by a toxin produced in food before it is consumed, and in the United States most frequently derived from home-canned foods, especially vegetables. The most important preventive measure consists in the thorough boiling of home-canned foods for fifteen to twenty minutes just before consumption.

Baby Clinic Distributes Much Milk To City Tots

Showing attendance of 234 babies at the Durham clinic in November, the Charity League reported having distributed 2,259 quarts of milk at a cost of \$368.46 for the month. The league also supplied a gallon of cod-liver oil and two and a half crates of oranges to the babies. Twenty-two babies were given toxoid treatment, 194 garments were distributed.—*Durham Herald*.

Inconsistencies

Charles O'Leary, an Irish plumber, was killed near his home in Ireland when a well caved in on him. The item was world-wide news. A hotel in Lansing, Michigan, burned, taking the lives of some forty or fifty guests. Every daily newspaper in America played up the story and foreign news services handled it. Human life is valuable, and important. The world is horrified at mass violent death. In Wake County this year 27 people have lost their lives in automobile accidents. And we shrug and say, "Something oughta be done about it"—and continue to let 13- and 14-year-old boys and girls drive our cars, rush along at much greater speed than the legal 45 miles an hour, and otherwise contribute to the ever-increasing danger of highway travel. Human beings are valuable, and important, and exceedingly inconsistent and queer. — *Raleigh Courier-Journal*.

Malaria Control Activities In North Carolina

By M. R. COWPER, Assistant State Director, Malaria Control

SEVERAL years preceding 1933 the North Carolina State Board of Health gave little attention to its malaria problem. This delinquency was due to the marked decrease in the incidence of the disease which took place during those years. Health authorities had begun to suspect that in North Carolina malaria was fast becoming a disease of the past. But this proved untrue, as the decreasing incidence was found not to be a permanent condition. During the summer of 1932 the North Carolina State Board of Health began to receive frequent requests for malaria investigations, and such requests increased during the following summer. The Health Department provided for these investigations, but only a small amount of control work resulted. A severe and abrupt transition of the intensity was noted this past summer (1934), when the disease reached most alarming proportions. Several rather severe epidemics occurred, and judging from reports of the local physicians, there was a disturbing increase of malaria in all parts of Eastern North Carolina and in many portions of the Piedmont district.

Fortunately, a program for the control of this disease received the necessary impetus from Government relief agencies, which in November, 1933, announced a program that included a Federal project in drainage for malaria control for those states subject to the disease. The responsibility for organizing such a program was placed with the U. S. Public Health Service, and that department, through its local agency in North Carolina—the North Carolina State Board of Health—organized with relief funds a supervisory personnel to be used for malaria control. This was a slow and arduous task, because engineers with experience in malaria control were not

available. With the help of the Public Health Service experts in the field of malaria, and those members of the State Board of Health who also had had experience in that activity, a supervisory personnel was set up and trained as quickly as possible. These men proved to be very conscientious and soon gathered a great deal of information about malaria control methods.

During the existence of the Civil Works Administration the personnel consisted of one assistant State director, six district field supervisors, six assistant field supervisors, and an engineer for each county which participated in the program. Under the Emergency Relief Administration only seven district field supervisors and the assistant State director are employed. The county supervisors have been combined with the regular ERA project supervisors.

The following procedure is used by the Malaria Control Division in its relation with the Government relief agency:

The malarious portion of North Carolina is divided into districts, each with a supervisor. During the CWA the assistant district supervisors served immediately under these supervisors. Then came the county supervisors, who in turn instructed the foremen. No assistant district supervisors are employed by the Emergency Relief Administration. Form reports have been printed for the foremen and county supervisors; the foremen forward these reports daily to the county supervisors, who at the end of the week collect this information and send it to the office of the assistant State director of malaria control. In this office the activity reports from all the counties are accumulated and entered on the regular U. S. Public Health Service report for this service. Copies of these records are then forwarded to the Public Health

Service and to the State ERA office for their files.

Requisitions for malaria control work are first forwarded to the State ERA office, from which they are sent to the State Board of Health. There they are referred to the Malaria Control Division, whereupon a district supervisor immediately makes an inspection in order to determine the merits of the proposed project. Upon the approval of the district supervisor the project is placed before the county health officer, who in turn likewise adjudges its merits. Then a meeting is called for the persons interested in such a project, as affidavits must be signed by them, stating that the responsible governmental unit will maintain all malaria control work installed by the Government. The project is then placed in the hands of the county engineer, who prepares plans, profiles, and estimates for the proposed drainage system, under the direction of the district supervisor of malaria control. Blue-prints of all plans and profiles are on file at the State office of the Malaria Control Division.

When a requisition for malaria control work is finally completed it is forwarded to the Malaria Control Division, and the signature of the assistant State director attached. Following this, it must be referred to the State ERA office, where final approval is granted by the State Emergency Relief Administrator. When this is received it is then possible for the work to be started. All the projects are carefully supervised, and the specifications for location, grade and slope suggested by the U. S. Public Health Service are strictly followed.

There are many different types of projects begun by the CWA and later completed by the ERA. Many of these had in former years been inspected by representatives of the North Carolina Health Department, and by representatives of the U. S. Public Health Service, and were declared to be malaria hazards. Others were judged as meritorious after a study of the conditions and available malaria history. The Division relied

upon the opinion of the county health officers and local physicians when granting approval of projects about which no other condemning information could be obtained. Such procedure was necessary for projects brought to its attention after the end of the *Anopheles* breeding season.

Malaria in North Carolina is most prevalent around old mill ponds and fish ponds. These ponds, as a rule, have no economic value whatsoever. The Malaria Control Division makes an effort to drain all such places made known to its representatives, and has succeeded in ridding the State of several hundred. The next type of project in importance is the ponded swamp. These swamps have no well-defined channels, but consist of a group of still-water ponds. Several of this type of project have required the use of dredging machines. These machines were made available by the purchasing department of the CWA and ERA.

It was discovered that in the coastal section of North Carolina *Anopheles* breeding was most prolific in those small fresh-water swamps which had been clogged up by fallen trees, débris, and floatage, and were no longer subject to the tidal flow of salt water. In these instances effective control was obtained by opening up the mouths of these swamps and rendering the breeding places salty.

The unkept drainage districts are another prolific source of malaria. Many of these had silted up to such an extent as to leave large lakes where *Anopheles* breeding was tremendous, and formed very dangerous health hazards. Control along these projects is, in most cases, obtained by cleaning out and removing obstruction from the old channels and by installing numerous lateral ditches.

Other types of projects which were brought to the attention of the Malaria Control Division were those consisting of large and small sink-holes, borrow pits, shallow marshes, fresh-water pools, and sluggish streams. Each of these presented

a different type of engineering problem for the drainage engineer, and each was dealt with according to the requirements of the situation.

Aside from the actual drainage work, including the planning of such projects and installation according to specifications, district supervisors of malaria control visit all the counties, and through the county health officers and local physicians have made thorough surveys and have sought to bring to the attention of the State Emergency Relief Administrator the most meritorious projects. In several instances control measures other than drainage have been applied. Filling in of several borrow pits was effected. The use of paris-green mixtures and oil as practical mosquito abatement methods is now common in many cities in Eastern North Carolina. Several extensive screening campaigns have been completed. In all such work the specifications issued by the U. S. Public Health Service were strictly followed.

A malaria survey was made in fifteen counties during the month of February, 1934. The Malaria Control Division coöperated with the State Epidemiologist in promoting this work, which was conducted under the auspices of the U. S. Public Health Service. The results of this blood-slide index have not yet been made public. Another blood survey was made in a highly malarious territory of Camden County, North Carolina. The slides were found to be about 20 per cent positive.

A summary of the results obtained from the CWA drainage for malaria control program is as follows:

CWA

DECEMBER 1, 1933—MARCH 31, 1934

1. Number of counties engaged in malaria control activities	54
2. Total number malaria control projects started	392
3. Number of malaria control projects benefiting cities	132
4. Number of malaria control projects benefiting rural communities	268

5. Maximum number laborers engaged in malaria control one week	6,200
6. Average number laborers engaged in malaria control one week	4,740
7. Number miles canal and ditches either excavated or cleaned out under supervision of Malaria Control Division	566
8. Number new ditches excavated	1,390
9. Number of ponds drained	969
10. Total number acres ponds drained	2,972
11. Total acres swamp land drained or given proper outlet	93,278
12. Total number draglines used	9

A summary of the results obtained from the ERA drainage for Malaria Control program is as follows:

ERA

APRIL 14, 1934—OCTOBER 27, 1934

(Date of last report)

1. Number of counties engaged in malaria control activities	52
2. Total number malaria control projects approved thus far	202
3. Number projects affecting cities	123
4. Number projects affecting rural communities	79
5. Maximum number laborers engaged in malaria control one week	1,180
6. Average number of laborers engaged in malaria control one week	669
7. Number miles canal and ditches either excavated or cleaned out under supervision of Malaria Control Division	82
8. Number new ditches excavated	298
9. Number of ponds drained	661
10. Total number acres ponds drained	670
11. Total number acres swamp land drained or given proper outlet	5,060
12. Total number draglines used	5
CWA and ERA projects completed thus far	176

The work done thus far was calculated to benefit nearly 500,000 people. Two hundred thousand of these, in the opinion of health authorities, have already been given excellent protection from the malaria carrier. As for the sum total benefit derived from malaria control activities, there is no measuring-rod which can be applied. However, it may be truthfully stated that from the reports of physicians throughout the State, and in view of the alarming upward trend in malaria this year, those places which have completed malaria control projects have shown a surprising decrease in the prevalence of this disease. In no

instance has malaria increased in those areas. It is the opinion of the authorities that the completed work has thus far been most efficient.

The Malaria Control Division has made many sections of North Carolina malaria-conscious. It has aided very materially in this enlightenment by distributing literature and by delivering frequent lectures and radio talks on the subject. An earnest effort to educate the inhabitants of infected areas in the ways and means of protecting themselves from malarial fever has been an extra duty of every person employed to help with this program.

Immunity To Disease

By WALDEMAR KAEMPFERT

DR. REUBEN L. KAHN of the University of Michigan, whose work on the defenses of the tissues in protecting us against disease was awarded last year the prize of the American Association for the Advancement of Science, arose at Pittsburgh to amplify his theories. In a comprehensive survey of immunity he reached the conclusion that if we are alive at all, and if animals and men managed to evolve from more primitive forms, it is because of an acquired ability to fight off bacteria.

Medical science has regarded the phagocytes (soldier cells in the blood) and certain "antibodies" in the body fluids merely as agents that destroy invading bacteria. The fixed tissues (skin and muscle) were supposed to be hypersensitive. Hence a man might be both immune and hypersusceptible to the same germ at the same time.

Dr. Kahn has other views. To him an immunized person, in accordance with the law of self-preservation, is in a defensive state only. All the tissues, fluids, and phagocytes of the body carry in common the burden of defense. In fact, the fixed tissues, such as skin and mucous

membranes, are the first-line trenches, because through the evolutionary ages they have always been the first to resist disease-producing bacteria.

To account for the "allergic" condition—meaning that some of us are hypersensitive to particular pollens, fur, wool, or other substances—physicians talked of idiosyncrasies. This is bad science, because it explains nothing. Dr. Kahn is much more precise. To him an allergic condition (hay fever is one) is simply an overactive defense. This agrees with the accepted biological principle that any physiological activity may become so heightened as to disturb the general health.—*The New York Times*.

One of New York's most expert miniature painters is not only almost stone deaf and blind in one eye, but has only part vision in the other. Under this tremendous physical handicap, she turns out astonishing work. While for many of us the day is a bust if the breakfast bacon isn't the right crisp.—O. McIntyre in *Raleigh Times*.

Doctor Dafoe

By FRANK SMETHURST in News and Observer

GOOD Dr. Dafoe by this time has been wrung pretty dry to make reading for New Yorkers who find the simple reactions of his naturalness highly entertaining.

Reporters and photographers have trailed him in shifts and have chronicled all the variations of circumstance and setting in which the doctor has resorted to his stock phrase of unsophisticated surprise.

Dr. Dafoe has said "My, my!" in more places and to more people than "My, my" was ever said before.

The Canadian doctor is a natural for that species of commercial press agency that dreams of a seventh heaven to which very lucky publicity directors will go some day, a heaven in which perfect exploitation involves merely the dumping of a celebrity into the lap of newspapers equipped and eager to do their best—or their worst.

Thus far, Dr. Dafoe is possibly the second best bet of the century, a little better than the rating of second best would indicate, because the highest prize, Lindbergh, was coldly snooty toward exploitation except the exploitation of Wall Street, which prefers a grand and golden silence. Admiral Byrd has strained mightily to be coöperative, but the admiral was too unrealistically happy to lay down his life for science and breakfast cereal.

But New York's fêting of the obscure country physician who came into fame because a Canadian woman was mathematically a superlative mother may serve a worthy purpose beyond the hoped-for ends of its commercial sponsorship. It surely will if it shall direct attention toward those services which a surely selfish, safety-conscious society should establish for its mothers and babies and toward the disastrous ways of nature when nature is left to the hazards of accident and ignorance.

Meanwhile, the Dionne quintuplets on the eve of startling an unsophisticated Santa Claus out of six inches of girth were receiving the benevolent care which no child of prosaic birth and similar background may expect.

Adequate prenatal care is still something of a luxury.

A shockingly large percentage of babies are still left to the ravages of chance, which has never been much kinder to babies than to puppies and nothing like as kind to babies as to calves and pigs.

It is still an awful challenge of omnipotence to forestall or to interrupt magic accident in behalf of a well-born, competent, and self-sustaining society. Miracle overshadowed science in the birth and survival of the Dionne babies.

Dr. Dafoe has never claimed for himself a more vital rôle than that of professional by-stander in the Dionne household. He has asserted mastery of the extraordinary obstetrical technique.

He has confessed that he interrupted the process of medicine to invoke the services of the priesthood which philosophically seemed to him the more probable need.

But the difference between tragedy and joy in thousands of American homes is the difference between even the casual services which an enlightened physician might give harassed mothers and no service at all.

I'm not keen for socialized medicine in its ultimate and radical conception. But it seems to me that the social instinct which sanctions laws and medical service for the protection of society against communicable diseases is both cockeyed and impotent when it continues to permit bigotry and superstition to stand in the way of its protection from insanity and from the stupendous cost of congenital and accidental pauperism.

Medical service, more largely available than it has ever been, is still for those who can afford to pay for it.

Accidents of birth which create social disabilities are still private matters.

Medical service for motherhood is still possible only at the cost of the

private patient or the private physician.

And Dr. Dafoe himself with his obstetrical fee of \$3 is to date the most striking illustration of the burden which doctors out of their pride or stubbornness or professional fears refuse to permit organized society to discharge in their own interest and for the public good.

A Message For Thinking Citizens

By W. F. MARSHALL, Raleigh, N. C.

I—A MERE LAYMAN—am writing this letter through our State HEALTH BULLETIN to ask its thousands of readers to do a bit of helpful public service that I feel most of them, both men and women, will gladly render. It is that they speak or write to their Senators and Representatives and encourage them to do everything they can to provide adequate support for carrying on and expanding the sorely needed work of our State Board of Health. I believe that our legislators generally are disposed to do this anyhow, but there is nothing like making them feel that an interested and solid constituency is backing them to the limit in their efforts.

With the possible exception of the suppression of crime, promotion of the health of its people is the most important function of a government. The State Board of Health is our strong arm of offense and defense in the ceaseless warfare against disease. To deny it the means of prosecuting this war would be like sending soldiers into battle without breastwork, trenches, or weapons for their own defense and without first aid or base hospital for the wounded.

In the first eleven months of the past year 5,489 North Carolina babies died before they were a year old—950

more than in the same period of 1933. Who shall find the cause, apply the cure, and check the desolation if our State Board of Health is not provided with the means of meeting urgent emergencies and enlarged demands? There are some things to which we can afford to turn deaf ears in legislation, but the moans of infants dying in their helplessness is not one of them. But in rendering them unstinted first aid, it must not be forgotten that the surest road to a minimum infant mortality leads directly through the health, vigor, and intelligence of the parent stock; and the building up of a sound-bodied, virile, and intelligent people—this, this indeed, is the great task which we have commissioned our State Board of Health to perform.

In every line of its broad program for the physical well-being of all the people, let us rejoice to give adequate support to our State Board of Health. It is our never-surrendering "Battalion of Death" in the war against disease—a war from which no public-spirited citizen wants to seek discharge. Let us speak to our legislators and strengthen their hands in every effort to provide adequate means for carrying on the war with unfaltering aggressiveness.

J. G. BENTON, PRIN.
BX 470, CHAPEL HILL, N. C.



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This Bulletin will be sent free to any citizen of the State upon request.

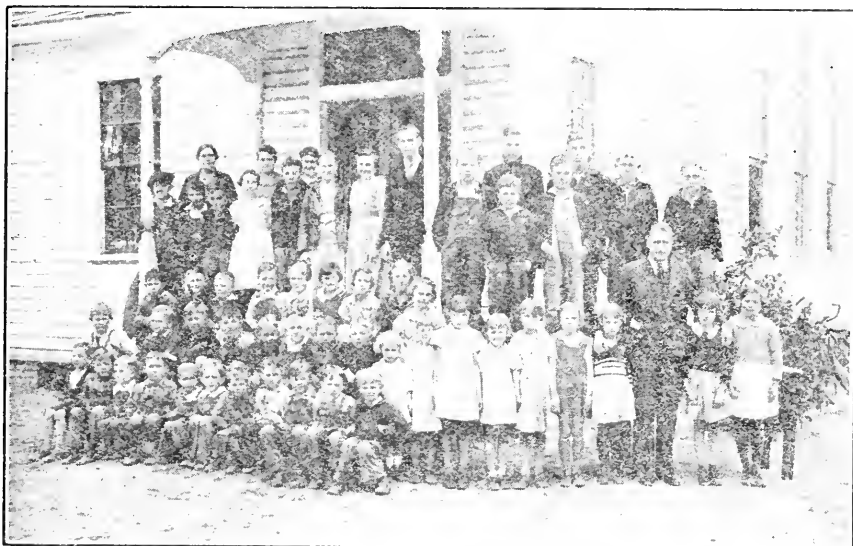
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CASEY'S CHAPEL SCHOOL, WAYNE COUNTY



The above picture shows the two teachers, the pupils, and Doctor Early, the State school dentist. All the pupils of this school who needed dental treatment received it, either at the hands of Doctor Early or private dentists. The school is, therefore, dentally speaking, 100 per cent perfect.

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Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
Diphtheria	Malaria	Typhoid Fever
Don't Spit Placards	Measles	Typhoid Placards
Eyes	Pellagra	Venereal Diseases
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough
	Sanitary Privies	

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters)	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Minimum Standards of Prenatal Care	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Breast Feeding	Instructions for North Carolina Midwives.
Infant Care. The Prevention of Infantile Diarrhea.	
Table of Heights and Weights	

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Notes and Comment

By THE EDITOR

ABOUT the middle of January we finished a hurried compilation of the provisional death reports for North Carolina covering the year 1934. These reports are provisional. That means that they are compiled from the first reports that come to the Vital Statistics Department; and such reports are always subject to correction and adjustment later on, when additional and supplementary reports come in. As a rule, such reports show fewer deaths than the final or corrected reports.

We want to center interest of our readers at this time, however, on two items in these reports. Those are the increase in the maternal and infant deaths in North Carolina during the year. By "infant" deaths is meant those babies who die before the end of their first year of life. By "maternal" deaths is meant those deaths of mothers incident to childbirth. There were during the year reported 547 maternal deaths, compared to 534 maternal deaths for 1933. On account of an increased number of births, and allowing for the increase in population, that made a slightly lower maternal death rate for 1934, as compared to 1933. The final reports, however, will probably dissipate this slightly better rate. In the case of the infant deaths, the situation is entirely different and much more discouraging. Comparing the provisional or first reports, month by month, in 1934 with those received in 1933, we are grieved that in 1934 6,072 deaths were reported in the first reports, month by month. This compared to

4,982 deaths recorded in a similar manner, month by month, for 1933. Thus we see a difference in provisional reports for the two years of 1,090 deaths more last year than occurred the year before.

Reports are, so far, not available from any other state. It will be some weeks yet before such reports are in hand; therefore we cannot tell how our State compares in this respect with other states—not even with those in the South immediately surrounding us. Judging from the information received the latter part of the year, however, from other states, we fear that our State had a larger percentage increase in infant deaths than most of the other states. It will be several weeks yet before we can possibly compile the reports showing which counties in North Carolina reported the largest number of infant deaths.

Throughout all of 1934 there was a trend to higher death rates, both general and infant, in most sections of the country. We shall not undertake any comparisons until all of the final reports are in, which will be about July 1. It is sufficient, however, for us to know that our State witnessed, for the first time in ten years, a material increase in infant deaths over the previous year. We cannot undertake at this time to go into an analysis of the causes of this large increase of deaths; we shall await further and more definite and correct information. We do state, however, without any hesitation, that the increase was not justified in any way by conditions existing in this State. It

is true there were extremes of cold in the early part of the year, and extremes of hot weather in the summer; there were strikes in the industrial areas which threw people out of employment for some time; but throughout all the State crop conditions were good and prices were better. It is true that the salaried people suffered from lowered salaries and increased cost of living, but no one knows yet the extent to which this contributed to the high infant death rate.

After many years study and straight thinking on this subject, we are convinced that the infant and maternal death rate in this State could be reduced by half if intelligent efforts were put forth and sustained for long enough time. To do this it will necessitate the expenditure of some money in every county and township in North Carolina. For several years almost half the infant deaths have occurred during the first two weeks of life. An increased number of births were reported the past year. When such an increase takes place, there are always more premature births, thus causing a higher mortality among babies. With nearly half the infant deaths occurring during what we might term the "neo-natal" period, it cannot be denied that such deaths could largely be prevented by putting into effect a widespread system of prenatal medical centers covering every section of the State for indigent women. Until this is done we shall continue our disgraceful position, at or near the foot of the column, in preventing infant deaths.

WARNING!

In the presence of abdominal pain—
 Never give a laxative or physic.
 Give nothing by mouth.
 Call your family doctor.
 Abdominal pain, cramp or soreness
 which lasts for four hours
 is usually serious.

THE STATE BOARD OF HEALTH
 MEDICAL SOCIETY OF THE STATE OF
 NORTH CAROLINA

NOTICE TO READERS OF THE HEALTH BULLETIN

Again we want to request any person writing to the State Board of Health for literature, or for any other purpose, to take particular pains, please, to place the postoffice address at the top of the letter or postal card and to sign his name correctly at the bottom. We receive a large amount of mail from citizens of the State requesting literature, especially the maternity and infancy literature, who carelessly fail to sign their names and give their postoffice addresses. Of course, under such circumstances, we cannot devise any means to comply with the requests; and often, because these people fail to receive the literature requested, the State Board of Health employees are blamed for inattention to important matters, whereas the only thing they can do is to await instruction as to whom to send the material and where to send it.

WHY NOT THE CHILD?

You know the model of your car,
 You know just what its powers are.
 You treat it with a deal of care
 Nor tax it more than it will bear.
 But as for Son—that's different;
 His mechanism may be bent,
 His carburetor gone to grass,
 His engine just a rusty mass.
 His wheels may wobble and his cogs
 Be handed over to the dogs.
 And he skids and skips and slides
 Without a thought of things inside.
 What fools, indeed, we mortals are
 To lavish care upon a car
 With ne'er a bit of time to see
 About our child's machinery.

—John Kendrick Bangs.

Where Shall We Swim?

By D. S. ABELL, Assistant Engineer

SCENE I

(The Smith residence, Charlottesville, N. C.)

MR. SMITH: Let's go swimming this afternoon after I get home from work. You have the children all ready so that we can start as soon as I get here.

MRS. SMITH: That sounds fine, but where shall we go? I don't like the river, because there's no beach for little Mary, and I can't help but wonder about the Jones's pool.

MR. SMITH: Why, what's the matter with the Jones's pool?

MRS. SMITH: The last time we were out there Fred came down with a cold, and I suspect that John contracted Athlete's Foot out there, he goes so much. Harry, why don't you stop to see Doctor Wilson and ask him about these pools and bathing places?

MR. SMITH: That's a good idea. There are all kinds of people who go swimming in these pools, and the health officer should know something about them. I'll get in touch with Doctor Wilson and phone you.

SCENE II

(Doctor Wilson's Office)

MR. SMITH: Good morning, Doctor Wilson; how are you this morning?

DR. WILSON: I'm fine; how are you, Mr. Smith?

MR. SMITH: I'm splendid, Doctor. I came in to ask about swimming pools from a health standpoint. I believe that swimming is one of the best types of exercise and recreation, but it seems to Mrs. Smith and me that there are a lot of things about a swimming pool that might be dangerous to health. Our son Fred sometimes "catches a cold" after going in swimming, and John has Athlete's Foot. Could these come from a swimming pool?

DR. WILSON: Yes. It is very probable that, in addition to the common cold, and Athlete's Foot, infections of the eye, ear, sinus, and skin can be

transmitted through the use of improperly operated and maintained swimming pools. Health authorities quite agree that the benefits derived from swimming are largely defeated unless the pools are so designed, constructed, and operated as to protect bathers from the transmission of certain infections. In fact, each bather can be considered a potential menace to the other bathers in the pool, particularly those close by. Several physicians in the city have told me that they can expect an increase in ear, nose, and throat ailments when the swimming season begins. At a swimming pool disease-producing organisms should be killed as soon as possible after they are introduced into the pool or deposited on the walkways or floors.

MR. SMITH: Well, Doctor, that sounds pretty bad.

DR. WILSON: Yes. In fact a swimming pool that is merely a tank filled with water reminds me of the other fellow's bath tub.

MR. SMITH: Do you suppose it would be all right for us to go to the Jones's pool?

DR. WILSON: No, Mr. Smith, the Jones's pool is not satisfactory from a sanitary standpoint. I have been concerned about that pool for some time. Within the past year the State Board of Health has begun to give us specific help with this problem.

MR. SMITH: I should think swimming pools would be a local problem, and would need frequent inspections.

DR. WILSON: That's right. Under the general health law which gives us authority, we have just recently adopted rules and regulations suggested by the State Board of Health. Our regulations require that all plans and specifications for swimming pools and bathhouses be submitted to and approved by the State Board of Health before we will grant permission for

the construction of a swimming pool in our district.

MR. SMITH: I suppose you will inspect the pools from time to time.

DR. WILSON: Yes. My sanitary inspectors and I have score sheets on which to record the sanitary condition of each pool and the quality of the water, as indicated by a sample analyzed in our laboratory. We are planning to publish in the newspapers the sanitary ratings of the different pools in this county, so that the public will know which are the better pools.

MR. SMITH: Well, that sounds good. But, what is wrong with the Jones's pool, Doctor?

DR. WILSON: They have done a fair business, but I feel sure that they would have had more patronage if the pool had been better built and maintained. It is a fill-and-draw pool.

MR. SMITH: Yes, I understand that they clean it out every Saturday night. Is that often enough?

DR. WILSON: No, that is not anywhere near often enough. The water in a swimming pool should be changed at least every eight hours.

MR. SMITH: Well, Doctor, I don't see how they could do that. It would cost a fortune.

DR. WILSON: Yes, that's true. It would cost Jones, for instance, about \$75 a day to change the water in his pool that often. Mr. Smith, if you have the time I should like to take you out to our new municipal pool. The plans for it have been approved by the State Board of Health, and the engineer who designed this pool, and is supervising its construction, is surely interested in giving us the most modern pool in the State.

MR. SMITH: I have plenty of time. Let's go out to the pool.

SCENE III

(The new Municipal Swimming Pool)

MR. SMITH: I have been reading about this pool in the paper, but I did not realize it was so nearly completed.

DR. WILSON: Yes, the equipment is already in place, although it has to be

started and tuned up. We should be able to open the pool within a week.

MR. SMITH: A tile pool. Say, I like that.

DR. WILSON: You know, I had quite a scrap on my hands about that. When I found that tile cost only a little more, I felt that we should use it. We cut down the size of the pool a little to enable us to use tile with the same funds.

MR. SMITH: What did the State Board of Health engineers say about that?

DR. WILSON: They said that most everyone was trying to build a pool that was entirely too large, and it was not the size of the pool that was important, but the cleanliness and the condition of the water.

MR. SMITH: Are they going to change the water in this pool every eight hours? How can the city afford to do it?

DR. WILSON: I'll show you. Let's go out beyond the deep end under the walkway.

MR. SMITH: What are those big steel, covered tanks?

DR. WILSON: Those are the filters, Mr. Smith. We are not going to drain the water out three times a day, as Mr. Jones would have to. We are going to filter it continuously. The water will come out of the pool from the big drains in the deep end, come through this pipe, and through the hair and lint catcher; then it goes past an ammoniator and a chlorinator, through the pump, past the alkali feeder and the alum feeder, through the filters, and then back into the pool.

MR. SMITH: What is that round tank over in the corner, Doctor?

DR. WILSON: That is a constant level box to keep the city water and the swimming pool water separated. Health authorities are very insistent upon keeping the two types of water apart. Serious epidemics have been caused by cross connections.

MR. SMITH: I am afraid I should be lost trying to operate this equipment.

DR. WILSON: Fortunately, we have an expert at our city water purification plant, and he is going to supervise the operation of this pool along with my inspectors. Of course, the city will have an operator and life guard on duty at all times when the pool is in operation.

MR. SMITH: I should like to go through the bathhouse, Doctor. We'll have to walk around the fence to get there. The fence goes all around the pool, doesn't it? That's a good idea. I've often thought that people wearing shoes had no business among the bathers.

Well, look at this! Say, little Mary will certainly enjoy that pool. What do you call it, Doctor?

DR. WILSON: That's the baby pool. It is six inches deep at one end, and two feet at the other, and it will be supplied with filtered and chlorinated water.

MR. SMITH: I see no place to sell refreshments.

DR. WILSON: No, we don't want the pool littered up with papers, bottles, and pieces of candy. Let's go inside the bathhouse.

MR. SMITH: Well, this is a bathhouse. Look at the counters, the baskets, the first-aid kit. What's the couch for, Doctor?

DR. WILSON: Oh, that's just for an emergency.

MR. SMITH: The dressing room here isn't what you might call fancy, but it is an improvement over other dressing rooms I've seen.

DR. WILSON: The bathhouse is large enough to take care of the expected patronage this summer, and it is so arranged that it can be enlarged later.

The arrangement of the facilities is important: first the toilets and urinals, then the lavatories and shower baths, and on the way to the pool, the foot bath.

MR. SMITH: A shower bath may be all right, but I would rather dive right in.

DR. WILSON: According to our regulations, you have to take a soap bath before you put on your suit.

MR. SMITH: I never take a bath over at Jones's pool. The shower bath water is too cold.

DR. WILSON: That's where we're one jump ahead. We're going to have plenty of hot water. "The cleaner the bather, the cleaner the pool."

MR. SMITH: That's right, isn't it? I'd rather everybody would take a bath before going in.

Let's go out closer to the pool. Doctor, what's this trough around the edge of the pool? Jones doesn't have anything like that around his pool.

DR. WILSON: That's called the scum gutter. You'll notice, too, that it's open and exposed to the sunlight, and any debris that gets on top of the water can be skimmed off.

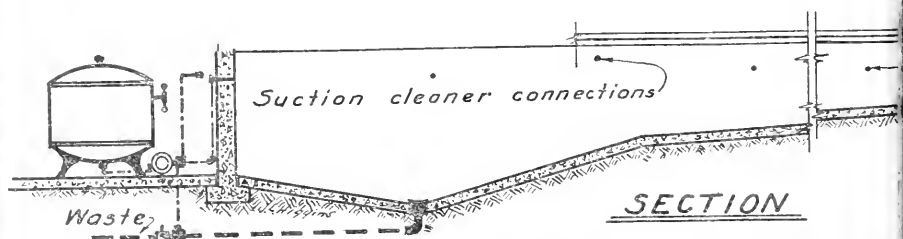
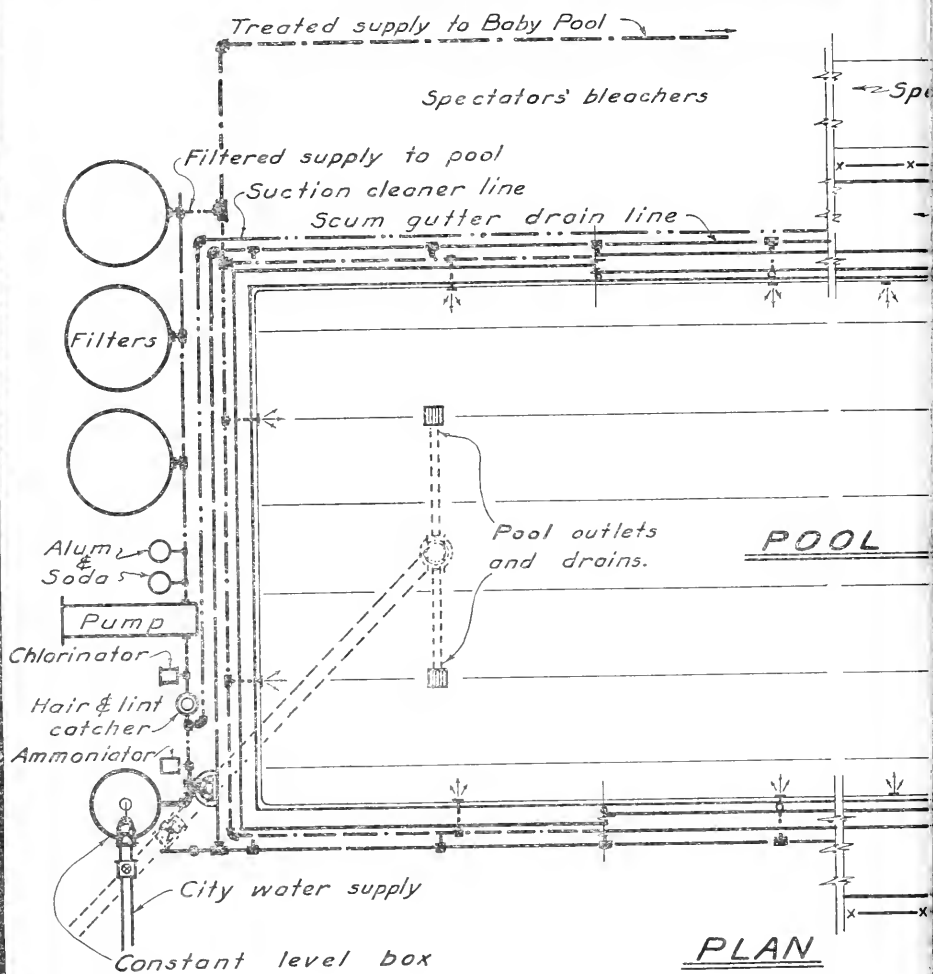
MR. SMITH: What are those big holes in the side of the pool? They look like windows. Are you going to look at the bathers from the outside? What is this, an aquarium?

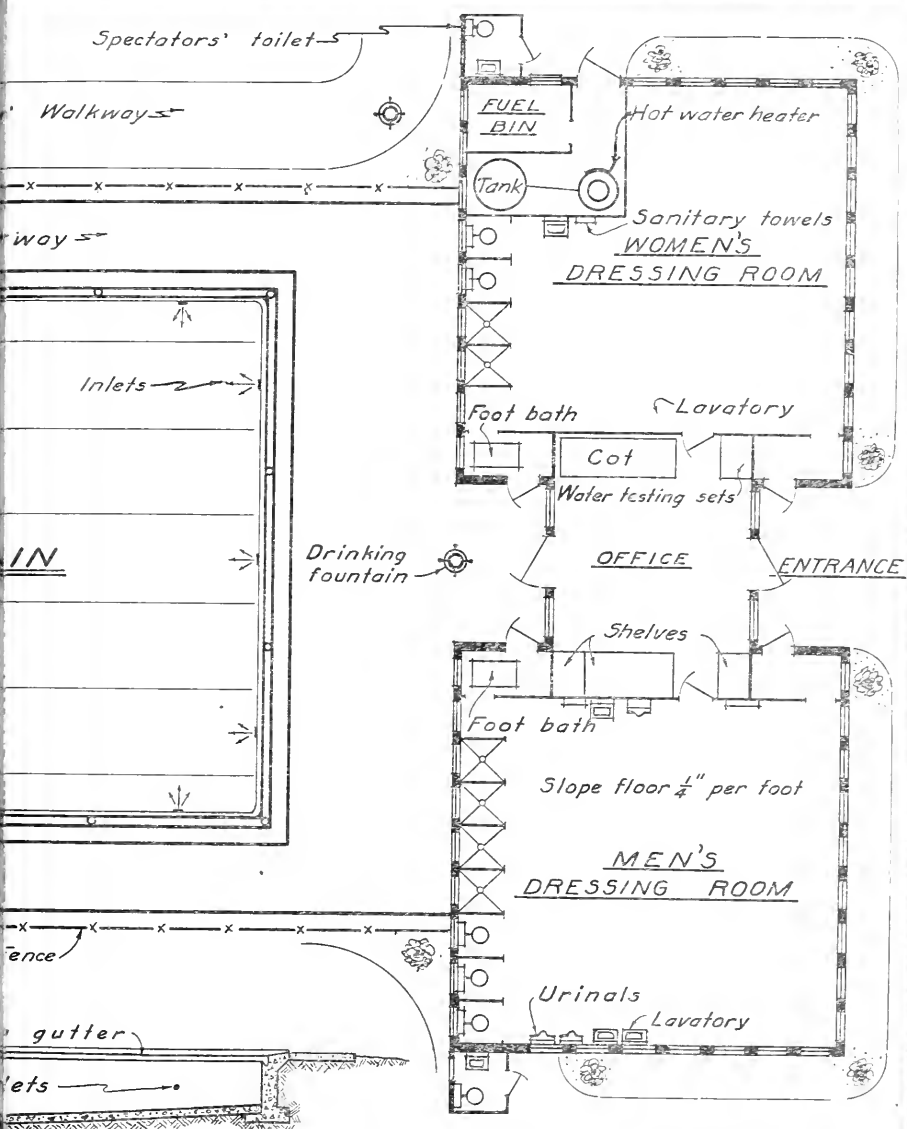
DR. WILSON: Those are for underwater lighting. The electricians are installing a lamp right over there.

MR. SMITH: Well, I would have expected that you'd have floodlights for night swimming. I've followed you all the way to this point, Doctor, but it seems to me that this underwater lighting is going a little too far. It looks like a rank waste of taxpayers' money. What health value can they have?

DR. WILSON: That's just the point, Mr. Smith. Even these large lights will not throw light through water that is dirty or cloudy. These lights would do no good in the Jones's pool. The water there is practically never clean. Thus, the swimming-pool operator must keep his water in the pool crystal clear in order to make the lights effective. There is the safety feature, too. Floodlights cause a glare on the surface. It might be possible for a swimmer to sink to the bottom of the pool unnoticed at night, if the water were not perfectly clear.

MR. SMITH: You win. Well, Doctor, I must be going. I certainly appreciate your taking me around. As soon as I get to the office I'll phone Mrs. Smith that we will do no more





**GENERAL LAYOUT
FOR A
SWIMMING POOL**

swimming until this new pool is opened. Then I am afraid the Smith family will want to pitch a tent and live all summer right next to the pool, so

they can go in swimming morning, noon, and night. Goodbye, Doctor.

DR. WILSON: Goodbye, Mr. Smith. I am glad you came.

Mental Hygiene Comes of Age

By SYLVIA ALLEN, M.D., *Secretary, N. C. State Neuropsychiatric Society*

TWENTY-FIVE years old! A quarter century! At an anniversary dinner in New York City on November 14th, President Angell of Yale University characterized Mental Hygiene thus: "Without parallel in the great achievements of our own day." At this dinner there were leaders in all walks of life—medicine, psychiatry, education, social work, religion, law, industry, etc. Their object was to do honor to Clifford Beers, secretary of the National Committee for Mental Hygiene.

It was through the desolate sufferings of Mr. Beers in three years of illness with a major mental disease that the concept of better care for those so afflicted and the future prevention of such affliction was born. Dr. Jacob Gould Schurman, former president of Cornell and Ambassador to Germany, said that Mr. Beers "descended into hell and for three years he was a denizen of that terrible land of unreason." On Mr. Beers' initiative a thoughtful group of eight men and women met in the residence of the Reverend Anson Phelps Stokes in New Haven in 1908 to see what could be done. The National Committee for Mental Hygiene was organized as a result.

The growth of the movement spread far beyond the original concept and has brought about transformations, not only in the care of the mentally sick and in the public attitudes toward mental disorders, but in work for the socialization and training of the feeble-minded, for the study and management of delinquents and criminals, for the training of the normal child, for the broadening of social work, and for more fundamental concepts of edu-

cation. This movement has shown its influence in every field which has to deal with human personality, and the period of its development may properly lay claim to being the twenty-five years to date of greatest significance in understanding the laws which govern the motivation of human conduct.

In these twenty-five years psychiatry has taken its great forward step through mental hygiene, which is to psychiatry what public health is to medicine.

North Carolina has been taking her place, more slowly but quite surely, among the forty-eight states of the Union in recognizing the volume of work to be done in this field. Recently a roster of the physicians interested in this subject was made by one of the most advanced thinkers on the question of the mental needs of the people of this State, the late Dr. Ernest M. Poate of Southern Pines. Thirty-seven physicians were listed. Dr. Poate called these physicians together on Friday, January 18, 1935, at Dix Hill, Raleigh, and there was formed a new and potentially vital organization which called itself "The North Carolina State Neuropsychiatric Society."

The desire to coordinate all factors for mental health, the desire to develop a public consciousness of these needs and to find ways and means for their provision had long been in Dr. Poate's mind. It seemed that life just allowed him strength and vitality to infuse into this group his great spirit and insight and to put before them his broad vision of a program. On his return from this exhausting experience influenza, with its virulent complication of pneumonia, attacked his

already devitalized state of health and caused the great loss of his future leadership to the organization. He died early on the morning of Friday, February 1st, just two weeks after the meeting. May it not be that his keen vision and his selfless forethought may serve this section of the country as that of Clifford Beers has served the Mental Hygiene movement in America? His death is an irreparable loss. His spirit is a compelling challenge.

Dr. John McCampbell, superintendent of the State Hospital at Morganton and vice president of the new organization, will act for the group. The next meeting, on April 10th, will be in Greensboro, on the invitation of Dr. Wesley Taylor.

The immediate action of the Society will be to present the cause of the State institutions to the Appropriations Committee of the General Assembly, under the leadership of Dr. R. S. Crispell of Duke University. The next step will be to ask admission as a section to the North Carolina State Medical Association.

Dr. G. M. Cooper, editor of THE HEALTH BULLETIN of the State Board of Health, has kindly volunteered space in this BULLETIN for information to the public, for which the organization is deeply grateful.

PHYSICIAN MISSING

Physicians all over America have been requested to watch for the appearance of Dr. George H. Bigelow, director of the Massachusetts General Hospital and former State Health Commissioner of Massachusetts, who has been missing since December 3, 1934, and may be suffering from amnesia.

Doctor Bigelow is 44 years of age, is 6 feet tall, and weighs about 175 pounds. He has blue eyes and black hair.

Hospitals everywhere are particularly requested to look out for all amnesia victims.

COPIES OF BULLETIN WANTED

We are anxious to procure, if possible, copies of the following issues of THE HEALTH BULLETIN:

February 1908
May 1908
October 1915

If any of our readers should have copies of these issues and would send them to us, it would be greatly appreciated.

HOW TO EVADE THE MILK TAX

State sales tax on milk has been recommended by the joint finance committee of the Legislature. If put into effect, only way to beat it will be for mothers to let their infants draw their sustenance in the natural way. — *By Upton G. Wilson in Reidsville Review.*

REGISTER YOUR BABIES

One time Will Rogers was going to Europe or some foreign country and he was making an effort to secure a passport. To secure a passport one must give a general confession about one's self. That is they must prove among other things their place of birth. Will Rogers, it seems, was born in Oklahoma Territory, so he said, but he had difficulty to prove it. As a matter of fact if it came to a showdown there are perhaps many of us who could not prove that we were even born. We assume we were born, but we are not registered, and so the movement now under way by the Department of Commerce to register all babies will serve a useful purpose. In the years to come all grownups can prove that they were born, because they will have a written record to refer to, and so it will be wise for residents of this county and all counties to coöperate in a movement now under way to "Register Your Baby." — *The Beaufort News.*

A Proud Record

ON the opposite page we are publishing a graphic chart which affords a striking comparison between conditions existing today and those present seventeen years ago, when the State Board of Health inaugurated its State-wide oral hygiene work. The State Board of Health in 1915 to 1917 made a careful survey of twenty thousand school children in twelve different counties in order to ascertain the exact conditions then prevailing. It was found that not less than 95 per cent of all children enrolled in the public schools needed dental treatment. A very large percentage of the children had lost one or more of their sixth-year permanent molars. But few of the teachers, and still fewer of the children, had any but the vaguest conception of what the care of the teeth and mouth health meant in the general health and welfare of the child.

In the face of the foregoing, with a population little interested, and with no chart or compass to guide us, the State Board of Health embarked in 1918 on an extensive State-wide method of teaching oral hygiene in the schools of the State. Six young dentists were employed and outfitted with crude equipment suitable for setting up very quickly a rudimentary dental office. Each dentist had a foot engine and a folding chair, which constituted the two largest pieces of equipment. With this outfit, these young men were instructed to go into every schoolroom in the lower grades of every school in every school district in every county of the State and inspect and give instruction to the school children between the ages of six and thirteen years. They were required to record on an individual chart, to be sent to the State Board of Health, the conditions they found in the child's mouth and the record of whatever treatment they rendered. The treatment consisted of the simplest kind of fillings, prophylactic work,

such as cleaning, and the treatment with silver nitrate of primary teeth and extracting. They were required to emphasize the educational features of the plan. The treatment necessary in each case was to be simply a question of teaching by example. For instance, if a child had four permanent molars decayed, the dentist was instructed to fill one of them with a simple type of filling, so that the parent could see what had been done, and he was urged to take the child immediately to a private dentist for the remainder of the work.

Since that July day in 1918 when the first of these young men started out, six of them in as many counties, emissaries of this department have successively gone into every school district in the State, including the larger cities and the most remote sections, and every school child under thirteen years of age has been examined and necessary treatment recommended, and literally hundreds of thousands of them have had their teeth cleaned by the dentist and instructed how to preserve their teeth. Hundreds upon hundreds of lectures have been given to parent-teacher meetings, women's clubs, teachers' associations, in addition to classroom lectures to the children themselves. When the history of this period comes to be written up, in all probability this work will be accorded the distinction of being of as much or more benefit to this generation and the children to follow as any other contribution made to society.

The director of the work, the man who invented the plan, who organized it, and who fought it through to a successful establishment had no chart or compass to go by. Nowhere in the United States in rural sections had such an undertaking ever been executed. There was nowhere that he could turn to procure advice from people who had had experience, because there were none such in this

country. The work was a pioneer organized dental profession and to the work. The chief credit, of course, forward-looking leaders of that profession, who realized its importance.

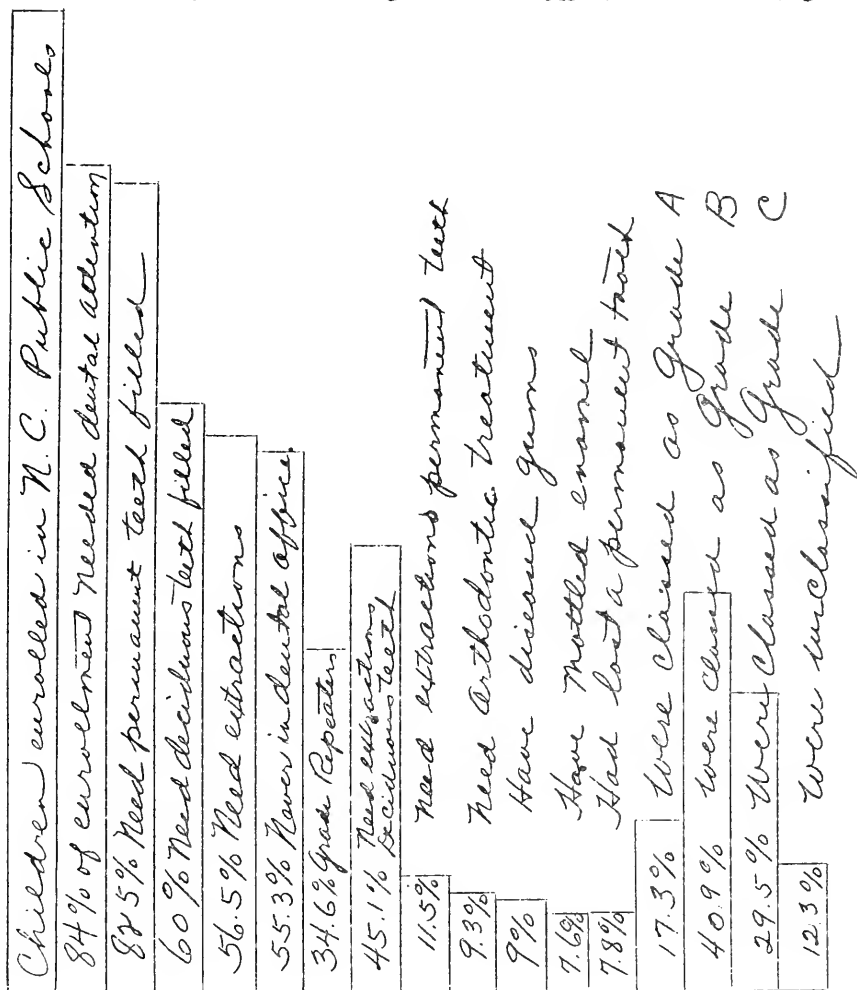
DIVISION OF ORAL HYGIENE
NORTH CAROLINA STATE BOARD OF HEALTH

Dental Conditions In North Carolina Public Schools as Revealed in
Mouth Health Survey, Feby. 20 - 22, 1934

1.42 is average number of Counties per child examined

.56 Extractions needed per month.

These figures are low and show benefits of Mouth Health Teaching in North Carolina Schools.



Milk Sanitation In North Carolina

By WARREN H. BOOKER, Director, Division of Sanitary Engineering

THE development of milk sanitation in North Carolina is very gratifying indeed. In 1932 some 86 North Carolina cities and towns were operating under the Public Health Service Milk Ordinance. In 1933 this number had increased to 97, and by the end of 1934 we had 104 milk ordinance towns. That was more than any other state except Texas, which last year had 117 ordinance towns.

However, North Carolina consoled herself with the fact that even if Texas had 117 ordinance towns to our 97, they also had 202 towns with over 2,000 population to our 85 towns of over 2,000 population.

Furthermore, North Carolina had 24 towns in 1933 making over 90 per cent on municipal milk ratings.

This was more than any other state except Alabama, which has 27 towns making over 90 per cent. By July 1, 1934, North Carolina had moved to the head of the procession, as Alabama showed only 20 towns at that time to our 24 making over 90 per cent on their milk ratings.

According to reports which have just come from the Public Health Service, North Carolina again leads all the other states with 29 towns making more than 90 per cent on their milk rating. The towns listed below in capital letters have made 90 per cent or more in their milk rating.

These milk ratings serve to indicate to health officers, their dairy inspectors, and the general public the status of the dairy sanitation in their respective towns.

U. S. PUBLIC HEALTH SERVICE MILK RATINGS IN 1933 AND 1934

NAME OF CITY	Daily Consumption		Retail Raw Milk Rating (per cent)		Pasteurized Milk Rating (per cent)		Enforcement Rating (per cent)	
	1933	1934	1933	1934	1933	1934	1933	1934
Albemarle.....	0.69	0.65	92	89	....	....	92	93
ANGIER.....	0.11	0.13	65	100	....	....	†	97
APEX.....	0.19	....	97	....	....	....	98	....
Asheboro.....	....	0.33	....	61	....	....	....	74
Asheville.....	0.41	....	87	....	77	....	64	....
BEAUFORT.....	0.22	....	96	....	....	....	....	....
Black Mountain.....	....	1.70	....	66	....	....	....	89
Bryson City.....	....	0.37	....	72	....	....	....	97
BUIES CREEK.....	....	0.43	....	91	....	....	....	97
Burlington.....	0.58	....	95	....	79	....	87	....
Canton.....	0.50	0.52	98	80	....	....	96	95
Cary.....	0.22	....	88	....	....	....	98	....
CHARLOTTE.....	....	0.42	....	92	....	96	....	95
CLINTON.....	0.35	0.25	80	90	....	....	88	93
COATS.....	0.43	0.37	97	93	....	....	†	97
Concord.....	....	0.45	....	83	....	89	....	92
DUNN.....	0.19	0.22	95	92	....	....	†	97
DURHAM.....	....	0.49	....	96	....	90	....	90
East Spencer.....	....	0.13	....	84	....	84	....	76
Edenton.....	....	0.10	....	87	....	....	....	....
ELKIN.....	0.51	0.61	93	93	....	....	93	93
Enfield.....	....	0.23	....	71	....	....	....	65
ERWIN.....	0.16	0.17	95	94	....	....	†	97
Farmville.....	0.44	0.44	69	44	....	....	69	23
Fayetteville.....	0.43	0.56	95	93	81	83	98	98
Forest City.....	....	0.40	....	63	....	....	....	94

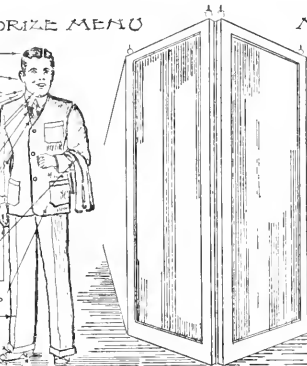
NAME OF CITY	Daily Consumption		Retail Raw Milk Rating (per cent)		Pasteurized Milk Rating (per cent)		Enforcement Rating (per cent)	
	1933	1934	1933	1934	1933	1934	1933	1934
Fremont.....	.....	0.15	....	65	....	....	....	92
Goldsboro.....	.....	0.25	....	85	....	84	....	92
Granite Falls.....	0.45	0.20	92	87	....	....	83	65
GREENSBORO.....	0.45	0.55	91	95	85	91	76	69
Greenville.....	0.30	0.36	71	76	....	....	65	34
HAMLET.....	0.39	0.30	95	94	....	....	97	98
Henderson.....	0.28	0.20	55	71	....	....	73	81
HENDERSONVILLE.....	0.68	.....	97	....	93	....	98	....
Hertford.....	.....	0.29	....	86	....	....	....	....
Hickory.....	0.59	0.51	94	92	86	61	93	93
HIGH POINT.....	0.38	.....	95	....	94	....	95	....
HOPE MILLS.....	0.16	0.18	99.5	95	....	....	98	98
Kannapolis.....	.....	0.31	....	83	....	89	....	92
Kings Mountain.....	.....	0.23	....	36	....	....	....	49
Kinston.....	0.35	0.34	85	38	....	52	79	40
Leaksville.....	1.90	1.9	97	86	55	93	90	83
LENOIR.....	0.47	0.35	95	90	....	....	91	68
Lexington.....	0.35	0.39	88	52	80	42	79	25
LILLINGTON.....	0.32	0.21	85	91	....	....	†	97
Lincolnton.....	.....	0.41	....	34	....	....	....	14
LUMBERTON.....	.....	0.40	....	91	....	....	....	84
MANTEO.....	0.59	0.44	94	90	....	....	87	97
MONROE.....	0.46	0.25	47	96	....	....	†	95
Morehead City.....	0.28	0.22	93	87	....	....	96	88
MOUNT AIRY.....	0.28	0.36	99	97	....	....	98	96
Mount Olive.....	.....	0.22	....	86	....	....	....	92
NEW BERN.....	.....	0.21	....	90	....	....	....	86
Oxford.....	0.46	0.30	86	87	....	....	93	81
PINEHURST.....	.....	4.10	....	96	....	....	....	95
Raleigh.....	0.46	.....	96	....	88	....	97	....
Reidsville.....	0.44	0.42	78	55	....	93	42	30
ROCKINGHAM.....	0.62	0.66	93	96	....	....	98	98
ROCKY MOUNT.....	0.26	0.30	96	95	71	90	98	95
Roxboro.....	.....	0.24	....	38	....	....	....	65
Salisbury.....	.....	0.43	....	86	....	89.1	....	97
Sanford.....	.....	0.34	....	63	....	....	....	80
Scotland Neck.....	.....	0.23	....	75	....	....	....	70
SOUTHERN PINES.....	.....	0.76	....	94	....	....	....	94
Spencer.....	.....	0.28	....	65	....	90	....	76
Statesville.....	0.28	0.32	85	70	....	....	65	56
Thomasville.....	0.20	.....	90	....	93	....	85	....
Tryon.....	0.58	0.49	84	37	....	....	59	36
Washington.....	.....	0.26	....	62	....	....	....	36
Waynesville.....	0.48	0.66	96	74	....	49	97	93
Whiteville.....	0.49	0.56	79	79	....	....	42	50
WILLIAMSTON.....	.....	0.15	....	92	....	....	....	....
Wilmington*.....	0.39	0.39	85	80	66	67	....	....
WINSTON-SALEM.....	0.34	0.38	92	92	94	98	93	91

†Initial survey. *Not an ordinance town.

PERSONNEL REVUE BEFORE GOING ON DUTY

MEMORIZE MENU

COMB HAIR NEATLY
BRUSH THE TEETH
BE READY TO SMILE
SPEAK PLEASANTLY
HAVE CLEAN SHAVE
WEAR CLEAN COLLAR
WEAR CLEAN SHIRT
TIE TIE NEATLY
NO B.O.
CARRY TOWELS OVER
ARM NOT UNDER ARM
WASH HANDS CLEAN
AND MANICURE NAILS
WEAR CLEAN UNIFORMS
CREASE TROUSERS
HAVE SHOES SHINED
WEAR RUBBER HEELS



MEMORIZE MENU

COMB HAIR NEATLY
BRUSH TEETH
BE READY TO SMILE
SPEAK PLEASANTLY
USE LIPSTICK AND
ROUGE SPARINGLY
WEAR STARCHED
COLLARS AND CUFFS
NO B.O.
CARRY CLEAN TOWELS
OVER FOREARM - NOT
UNDER ARM
WEAR CLEAN APRONS
WASH HANDS CLEAN
AND MANICURE NAILS
WEAR CLEAN UNIFORM HOSES
WEAR RUBBER HEELS
HAVE SHOES SHINED



NOTE: TWENTY PER CENT OF
OUR SUCCESS DEPENDS UPON NEAT,
CLEAN, AND EFFICIENT EMPLOYEES.

ON DUTY

GIVE THE CUSTOMER IMMEDIATE AND
INDIVIDUAL ATTENTION. HAND HIM A
MENU AND A GLASS OF WATER
THIS WAY — — NOT THIS WAY

AVOID TOUCHING OUTSIDE OF DRINKING
CUPS OR GLASSES AROUND THE TOP.
GIVE QUICK, POLITE, AND SILENT SERVICE.
SATISFY THE CUSTOMER IN HIS OWN WAY.

PLEASE THE CUSTOMER. — DEVELOP
YOUR PERSONALITY. — SELL HEALTHY —

EXCEL

DON'T SMOKE ON DUTY. DON'T READ ON
DUTY. DON'T EAT ON DUTY.
DON'T PICK TEETH ON DUTY.
DON'T BE AS MARTIAL.
DON'T PRIMP BEFORE CUSTOMERS.
DON'T HINT FOR A TIP. DON'T BE
INDIFFERENT. DON'T CHEW GUM ON DUTY.
DON'T LEAN OVER SHOULDERS OF
CUSTOMERS WHEN TAKING ORDERS.
WHEN PATRONS ASK FOR WATER,
BREAD, AND BUTTER, IT IS EVIDENT
YOU HAVE NOT BEEN ON THE JOB.

BE ALERT AND OBSERVING

SEE THAT LINEN, GLASSWARE,
SILVERWARE AND DISHES ARE SPOTLESS.
KEEP WALLS, CEILINGS, FLOORS & WINDOWS
CLEAN. KEEP FLIES OUT. DON'T TOLERATE
FLIES NEAR FOOD. KEEP TOILETS & WASH
ROOMS IMMACULATELY CLEAN AND
SUPPLIED WITH INDIVIDUAL TOWELS, SOAP &
TOILET PAPER.

LAST YEAR ~ IMPROPER
SERVICE COST MILLIONS OF DOLLARS IN
OUR BUSINESS.

IN THE KITCHEN

ALTHOUGH BEHIND SWINGING DOORS
MAINTAIN THE SAME HIGH
STANDARDS. KEEP GARBAGE
IN COVERED METAL CANS.
KEEP STORAGE ROOM & PANTRY
CLEAN. INVITE THE PUBLIC TO
INSPECT YOUR KITCHEN.



ISSUED BY THE
STATE BOARD OF HEALTH
RALEIGH, N.C.

SERVE GRADE - A - MILK ONLY

IN BOTTLE WITH CAP BESIDE GLASS
ON SHOWING GRADE OR TRAY.

THIS WAY — —

DO NOT
SERVE MILK

IN OPEN GLASSES THIS WAY. — THE
GREATER CARE SHOWN TO PROTECT PATRONS' HEALTH
THE GREATER WILL BE THEIR APPRECIATIONS.

MAKE CLEANLINESS A HABIT

"IF YOU HAVE TO COUGH OR SNEEZE
DO IT BEHIND YOUR
HANDKERCHIEF PLEASE."



CULTIVATE CLEAN HABITS.
NEVER FINGER THE
NOSTRILS OR OTHER PARTS
OF THE BODY. SUCH HABITS
ARE INEXCUSABLE. WASH
HANDS CLEAN UPON RETURN-
ING FROM REST ROOMS, AND
EACH AND EVERY TIME ON RETURNING TO
DUTY. DON'T TOUCH INSIDE OF DISHES,
CUPS OR GLASSES WITH HANDS. DON'T
TOUCH FOOD WITH BARE HANDS. DON'T
SERVE SOILED KNIVES, FORKS, SPOONS
OR DISHES. HANDLE UTENSILS BY THE
HANDLES.

THIS WAY — — THIS WAY

FINALLY — FILE A MEDICAL CERTIFICATE
WITH THE MANAGEMENT, BEGINNING
WITH EMPLOYMENT, AND AT LEAST ANNUALLY
THEREAFTER, SHOWING FREEDOM FROM T.B.,
SYPHILIS & CONTAGIOUS & INFECTIOUS DISEASE,
AND THAT YOU ARE NOT A TYPHOID CARRIER.

SUCCESS

BE A MODEL IN YOUR LINE.
IN SUCH AN ATMOSPHERE
CUSTOMERS FIND A HAVEN
BRINGING THOUSANDS
OF DOLLARS TO THE
DERIVING BUSINESS.



MR. JNO. G. BEARD,
CHAPEL HILL, N. C.



The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

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APRIL, 1935

No. 4

UPTON G. WILSON, MADISON, N. C.



For twenty-three years a physically helpless cripple; but whose life is an inspiration to the handicapped everywhere.

(See story on page 5 of this BULLETIN)

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
Diphtheria	Malaria	Typhoid Fever
Don't Spit Placards	Measles	Typhoid Placards
Eyes	Pellagra	Veneral Diseases
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough
	Sanitary Privies	

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine	5 to 6 months; 7, 8, and 9 months; 10,
monthly letters)	11, and 12 months; 1 year to 19 months;
Minimum Standards of Prenatal Care	19 months to 2 years.
Breast Feeding	Diet List: 9 to 12 months; 12 to 15
Infant Care. The Prevention of	months; 15 to 24 months; 2 to 3
Infantile Diarrhea.	years; 3 to 6 years.
Table of Heights and Weights	Instructions for North Carolina Midwives.

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Notes and Comment

By THE EDITOR

AS these lines are written there is a bill before the Legislature to completely remove the last vestige of legal protection now available to prevent the spread of venereal disease through marriage. Two years ago the Assembly repealed the Bellamy marriage law enacted by the Legislature of 1921 through which an innocent woman was protected from marrying a man infected with a venereal disease, and which protected both parties against insanity and tuberculosis. Before repeal was complete an amendment was accepted requiring an affidavit (not a physician's certificate) from the male certifying to freedom from venereal disease and tuberculosis. It is this remnant of a decent requirement in the marriage law which would be removed.

The Bellamy law was a good law, one of the best and most reasonable ever put on our statute books. It was strictly a preventive measure. It was based on sound scientific facts and was easy to enforce. The hue and cry which went up from numerous petty politicians was that young folks were running to South Carolina and Virginia for marriage to evade the law and we were losing—not decency, safety, or self-respect—but “revenue.”

There is a division of medical and scientific opinion all over the world about the desirability and effectiveness of eugenic legislation, sterilization, etc. But there is no argument about the terrible ravages of venereal

disease and the desirability of prevention at any cost.

Without the law it is difficult for any father of a marriageable son or daughter, particularly the latter, to satisfy himself before the marriage ceremony that his daughter is marrying a clean and healthy youth. After marriage occurs it is too late to investigate. The Bellamy law was easily enforceable because physicians realized that if they made a careless examination or a farcical one and it was proved afterward that the medical certificate was carelessly given and venereal disease was present and not discovered and noted, that the physician so awarding such a so-called certificate could be held liable for civil as well as criminal damage. Any man contemplating marriage who cannot afford a few dollars for a competent medical examination has no business getting married.

About the time the bill was repealed the force of public opinion was quietly but surely making itself felt toward the “slip away” to South Carolina marriages. In due time it would have ceased. But “revenue!” The matter of a few thousand broken homes, feeble-minded children, women invalids, insanity, and other sordid consequences must be considered as nothing when “revenue” is involved. Verily money was what kicked the lid off Pandora's famous box. Nothing else seems to matter any more.

Instead of repealing what little is left of such safeguard in marriage, the General Assembly should enact a new and more stringent law with a

negative Wassermann from both the contracting parties as one of the requirements before securing license to marry. This should be in connection with a complete physical examination by a competent physician.

In matters of such importance to the health of this and future generations, we feel it the duty of the State Board of Health to speak plainly and fearlessly about these things. Our

institutions for the feeble-minded and insane are full, with a long waiting list outside. Many unfortunate persons are detained in ordinary jails while awaiting admission. More than a third of all inmates directly inherited their mental condition. In addition, a considerable per cent of them are there as a result of venereal disease.

Prevention is the only hope for the future.

Teaching Children Traffic Safety

THE Editor appreciates the letter quoted below from Dr. Verne S. Caviness of Raleigh. Doctor Caviness is chairman of the Section on Practice of Medicine of the North Carolina Medical Society. He writes voluntarily, and we are taking the liberty to publish his letter. It is evident that Doctor Caviness has given these matters serious and careful thought. Be sure to read his letter.

"DEAR DR. COOPER:

"I wish to commend you most highly on the February issue of THE HEALTH BULLETIN. The entire issue is excellent, but I think that your 'Notes and Comment' is the best.

"It is certain that children are not being properly trained by anyone with respect to the danger of playing and running about in the streets. I have taken one phase of this matter up with our Commissioner of Public Safety, and I think that he has taken kindly to my suggestion, and that in this way the mortality rate should be lowered here. Policemen or firemen are placed on guard at some of the schools in the city to assist the children in getting across the street. This is fine, but their efforts have been misdirected. Every motorist is familiar with the act of being stopped by a policeman to let one or more children cross the street ahead of him. I don't think that any motorist could directly object to this. The trouble comes in the influence such procedure has upon the children. My

contention has been that the policemen and firemen on guard could spend their time to much better advantage teaching the children to be careful in crossing the streets. The children idolize the big policeman who holds up his hand, stops a lone motorist, and lets the children cross the street. This minimizes the danger in their minds. The policeman protects the children perfectly, but only for a period of less than one minute a day, five days a week, and not more than forty weeks out of the year. It would be much better in all cities if the policemen would teach the children to stand on the sidewalk until they can cross the street in safety. The children would be learning to take care of themselves during the remainder of the day, and so many other days when there are no policemen to protect them. The policemen might also teach the children to cross only at street corners.

"I think that our local police department is attempting to follow the suggestions that were made to the Commissioner of Public Safety. If they will continue to do so, and will teach the children properly, I anticipate a lower pedestrian death rate in Raleigh as a result.

"I realize fully the responsibility that rests upon the motorist, but I do not think that pedestrians have been made to see that it is a mutual responsibility and that they must do their part in order to lower the death rate."

Bed-Ridden, But Not Beaten

A Short Short Story About "A Cheerful Cripple"

ON our front cover we are publishing a photograph of Upton G. Wilson, Madison, N. C. This man's life for twenty-three years has been an inspiring example for the afflicted to emulate.

On July 24, 1912, he was shot through the spine by a miserable coward whom he had just discharged for intoxication and disorderly conduct. Months of intense suffering followed, during which time he had several major operations in an effort to save his life. The physicians did not think he could live. From the moment the shot was fired he was completely paralyzed from the ninth vertebra down.

The story of Mr. Wilson's life and his remarkable fight against an adverse fate has been told many times in magazines and newspapers of national importance. Other people have fought against hard circumstances and won. Many others will do so again. The highlight in his record is the way in which he has conquered, and the manner in which his family have helped him.

The writer has suffered from a serious physical handicap for more than thirty years, which long ago buried all possibility of practical reward in his profession. The other day, however, on a brief visit to Mr. Wilson's bedside he felt ashamed that he had ever complained. In the presence of this man, now forty-six years old, who has spent half his life in bed, much of it in pain, unable to even fall off the bed alone, an overwhelming sense of the essential greatness of the human mind and character and a knowledge of its all but divine power comes over one. He is confined to bed within the four walls of a room, but in mind and spirit the world and all the cosmos is his province.

After the first long months of suffering were behind him, in which he decided he would not die and didn't, he had to make several hard adjustments. Among such was to quit pain-relieving drugs, which has been too much for many a strong man. He had to renounce self-pity and decide not to be sorry for himself, one of the hardest jobs any physically handicapped person has to do. Above all, he decided to be cheerful. Right here let it be written that he himself says: "That I have lived this long totally paralyzed from my chest downward, I attribute to two things: First, to careful, loving care by members of my family (mother now 79, father 82, sister, brother, niece); and second, to the scientific medical attention of my other brother, Dr. Newton G. Wilson. But for these two things I am sure I would have traveled on long before this."

He looked upon his plight as a challenge and cheerfully accepted the dare. He decided on two ventures, both of which have been successful. First he took up writing. After years of study and practice his work now is accepted by newspapers and magazines of the highest type. His weekly column formerly in the *Winston-Salem Journal* and now daily in the *Reidsville Review* is probably more widely quoted than any other writer in North Carolina. Second, he proceeded to build up a magazine subscription business. He has been successful in this. We hope that both these efforts may continue to grow.

As the writer left his bedside and his room on the sunny southern side of the fine old farm home, with the beautiful vista of rolling hills and farm homes and orchards and trees, he realized that in this case the walls were not a prison and that truly "Full against wind and tide some men win their way."

Safety In School Bus Transportation

Bethany Rural School in Rockingham County Seems to Have Solved the Problem

OFFICIALS of the State Board of Health have worried no little on account of several questions involved in the transportation of school children by the State ever since the plan was first inaugurated. To begin with, the matter of safety from injury has been of vital concern. Aside from the matter of protection from physical injury on account of accidents, many other questions are involved which vitally affect the health of the children. Almost from the beginning of bus transportation it seems that the prevalence of communicable diseases has increased. A half hour's ride on a school bus packed full of children coming from what was previously at least two or three or more separate school communities and being conveyed to and from school has made the spread of communicable diseases much easier and much more frequent. Such diseases as measles, scarlet fever, and diphtheria, to say nothing of scabies, pediculosis, and other aggravating conditions, have been much easier to contract. Most of the busses have been crowded far beyond capacity, and such conditions as so-called colds have simply spread through the school like the proverbial fire in the broom sedge, following as the result of the packing and crowding in the busses. Everybody knows, of course, that numerous accidents, in which one or more children have been seriously injured, and some lives lost, have frequently been attributed to the crowded condition of the bus, in which the driver had no room for free action. It is this point that we wish to discuss in this article.

Recently we had the privilege of a short visit to Bethany School in Rockingham County, some twenty miles southwest of Reidsville. This is one of the largest and most beauti-

ful consolidated rural schools in North Carolina. It is situated on a fine rolling hill with an abundance of trees and open playgrounds. The buildings are composed of one-story structures covering, we were told, when the new additions now under way are completed, about one acre and a half of ground. More than a thousand children are enrolled in the school there this year. About a dozen years ago, when the school was first built, an approved water supply with sewage disposal plant was built. Recently the valves in the toilets in one of the buildings have worn out and this necessitates the installation of a new system, which is probably installed by this time. The new construction, in which several additions are being made to the buildings, will include one of the most desirable features, which we think is a necessity in all large schools, and that is a separate toilet for the little girls, in which all of the fixtures will be suitable in size and arrangement for these little ones. This is to be on a tile floor, with toilets, walls, and everything conducive to perfect sanitary maintenance. The same arrangement is necessary for the little boys.

Mr. Carter, the enterprising young principal of this school, showed us a new bus which he has secured for his school this year. To our mind this new bus assures safety in bus transportation. The driver of the bus, with the engine and power plant, goes in front of the bus in a separate unit, completely cut off from the children to be hauled, except for the coupling. The bus accommodates something like one hundred and fifty children. The exit is from the side, in the middle of the bus. The ventilation comes through the roof of the bus. The seats are so arranged as to accommodate the different sizes

of children without too much crowding. And, finally, it is of solid steel construction all over. We were informed that a few days previous to our visit a reckless driver, driving a big passenger car at about sixty miles an hour, ran into the rear of the crowded bus sufficient to smash his own car to pieces, but the children in the bus hardly felt the jar of the impact. A very small dent on the corner of the bus was all that was visible of the accident. The driver is concerned solely with his driving. There is a conductor in charge, who is one of the high school students, of course, who opens the door and sees that the road is clear before letting out any of the little passengers. This bus, we are told, only cost about two thousand dollars complete. It will

last twice as long and carry twice as many children as the busses now ordinarily used.

As further proof that Mr. Carter has given the matter careful study, he showed us some of the old busses in use by the school in which he had the local mechanic to install iron bars which would prevent the children being thrown to the front in case of accident or quick stop. This protects the driver as well as protects the children from serious injury in case of accident.

We pass this information along to our readers everywhere who are interested in the safety of school bus transportation. We hope that before the opening of schools in September all of the new busses put in use by the State this year will conform to the foregoing requirements.

Oral Hygiene and the School Curriculum

THERE is no reason why the teaching of oral hygiene may not become a part of our public school curriculum.

The principles of oral hygiene are so simple that any child of school age, with ordinary intelligence, can understand them thoroughly. It would not be necessary to teach the child all the reasons why oral cleanliness is essential to a vigorous body and mind; but he or she can be taught how to keep the mouth clean and some of the more patent, simple, social and cosmetic reasons therefor; reserving the more scientific reasons, such as belonging to individual health, public health, increased mental capacity, longevity, and its influence upon posterity, to the higher schools.

There is, however, much prejudice to be overcome. This prejudice is in some instances due to the lack of knowledge or appreciation of the fact of the very close relationship which exists between an unhealthy and unclean mouth and many very serious general diseases of the body, such as

tuberculosis, gastritis, gastro-enteritis, pneumonia, diphtheria, etc., or of the very close relationship which exists between affections of the teeth and certain diseases of the eyes, ears, the accessory sinuses of the mouth and nose, or of the close relationship which epilepsy and insanity sometimes bear to diseased teeth.

In other words, this prejudice is the result of ultra-conservatism, "The old way is good enough." "Why should we take up with every new fad that comes along?" "Our children are better cared for than we were and yet they are no more robust in body or brighter in mind than was our generation." These people seem to have forgotten the change in environment that has taken place since their school days. Then the population was widely scattered over large country districts with their pure air and wholesome food, their early hours and simple pleasures, largely enjoyed in the open. Now the population is largely crowded into cities with their fetid air, unwholesome food, food gathered green and ripened

in transit, stale vegetables, cold-storage meats and eggs, impure doctored milk, canned fruits, canned meats, canned vegetables, drinks served at soda fountains, the syrups of which are made of synthetic chemicals rather than from pure fruit sugars, poorly ventilated buildings, their late hours and exciting pleasures. No wonder these children are no brighter in mind or stronger in body than was the generation which immediately preceded them. The great wonder is that so many have managed to survive under the great handicap that has been placed upon them.

Others will be prejudiced against it on account of the expense attached to its practice and teaching. With little argument it can be proved to the satisfaction of everyone that the teaching and practice of this branch of science in the public schools is a wise and economic measure, as it improves the general health of the children, betters their conduct, increases their mental activity and capacity,

lessens truancy, and greatly reduces the number of days lost from school through sickness.

It greatly reduces the number of children who fail to pass their examinations and have to remain in the same grade for the second or third or even the fourth year. Such conditions as these impose a heavy drain upon the school funds of our State each year and has for many years been one of the serious questions discussed by our school boards. The answer to this question has never been found until now, and the work done so far in this State has blazed the way for these anxious school boards and has demonstrated to those interested in the subject of oral hygiene that this department will prove to be one of the greatest factors in the conservation of public health, an equally important factor in diminishing the ever-increasing delinquency list in our public schools, adding to the physical comfort and happiness of the children, clearing their minds and making study a pleasure instead of a bore.—*Rutherfordton News*.

Social Planning and Rural Sanitation

By M. F. TRICE, Assistant Engineer, State Board of Health

A GREAT deal has been said in recent months about social planning and adjusting the misfits of our complex present-day civilization to the new order of things. Out of such discussions the terms "rural rehabilitation," "home subsistence farming," the "retirement of submarginal lands," "slum clearance," etc., have emerged to stand out in our minds as peaks in a mountain range of words. Much more remains to be said apropos the subject, and what is more important, there lies immediately ahead the herculean task of executing the program to be developed to effect a readjustment in our social structure.

Already in North Carolina a tentative program is emerging. The program to be evolved will be concerned

with both urban and rural populations that have become stranded. In both situations are many families, to use the current phrase, that must be rehabilitated.

Obviously the possibilities for rendering the indigent urban families self-sustaining are very limited. This fact will operate to effectuate an evacuation of them to rural areas where the opportunities for self-sustenance are so much more abundant. For the same reason the reclamation of impoverished rural families will be confined to the country and will involve a transfer from semi-barren lands to more fertile areas.

This shake-up and redistribution of a part of our population will subject those involved to new modes of living which in the main should result in

more healthful lives. Certainly, however, some health hazards will be encountered unless due consideration is given sanitation and the public health. Especially is this true as regards the urban population that is to be transferred to the country. Such people in all instances thus far have been protected from the ravages of filth diseases, such as typhoid fever, dysentery, diarrhea, hookworm disease, etc., by a wholesome and disease-free public water supply and an adequate sewerage system. Probably as a result of these very safeguards a natural immunity to such diseases that might have been developed in them through constant contact with such maladies will be lacking, and as a consequence they will be defenseless and at the mercy of such microbes once they are removed from the protection a paternalistic municipality has always provided for them. With respect to this situation, it is believed that the rural population *per se* will be less susceptible to such a possible danger.

From the foregoing, therefore, it is not difficult to appreciate the part sanitation is to play in the readjustment that is proposed. Since the public health is involved, and since perhaps we should be more concerned as regards the status of the rural population in this respect, it is well to take an inventory.

Almost a year ago a rural housing survey was conducted by a group of workers especially selected for the purpose. The undertaking was financed by the CWA and directed by Mrs. Jane S. McKimmon, State Home Demonstration Agent. Counties located in the mountains, piedmont plateau, and coastal plain sections of the State were selected for survey in order that the various geographic divisions of our commonwealth might be represented and the results obtained be applicable to the State as a whole. In all, twelve representative counties were combed for facts relative to present-day rural housing conditions. Astounding facts were revealed relative to all phases of rural

life; none, however, were more amazing than those pertaining to sanitation. Only 13.6 per cent of the rural homes were found to be provided with adequate and safe means of excreta disposal; 33 per cent of them had no means of excreta disposal whatever, other than that provided by barns, cribs, and the bushes; the remaining 56.4 per cent had facilities appraised as dangerous, which probably connotes open-back, disease-spreading privies.

Such a situation constitutes a grave public health problem the magnitude of which can be better appreciated perhaps by presenting the results of the survey in terms of population. Approximately two-thirds of our people live in strictly rural areas or in small communities that do not have public water supply and sewerage systems. This means that approximately two and a third million North Carolinians depend upon privately owned facilities for water supply and sewage disposal. Of this number three-quarters of a million have no privy or other means of excreta disposal and approximately a million and a quarter more of our people have privies, lean-tos, or shelters that are appraised as dangerous. In other words, two million North Carolinians either have no toilet facilities of any kind, or the structures that serve as places of excreta disposal are of the open-back type that permit the body wastes to be scattered therefrom by wind and rain, animals and insects. Two million people from which the forces of nature may spread one or many of the filth diseases. Under such conditions is it any wonder that the countryside is a fertile field for the sale of medicines of all kinds? In this connection the ailments or miseries with which many of our rural friends are continually afflicted assume new significance. That is truly a depressing picture of rural life in North Carolina and is one, moreover, that should concern all of us, regardless of whether we are urban or rural dwellers, for an incapacitated group of our people may harbor and keep

virulent the germs of our deadliest maladies, and among them may originate epidemics that may ravage the land the moment our public health vigilance is relaxed or weakened by a false sense of security.

Compare that picture of rural life in the State with vital statistics such as are recorded by the State Board of Health and one cannot help but think of cause and effect. During one ten-year period, arbitrarily selected, vital statistics reveal that an average of 1,875 people die needlessly each year in North Carolina of filth diseases. And to this dreadful toll must be added countless thousands that fall victims to them, but who do not succumb. They recover apparently and are unmarked by their suffering insofar as physical appearance is concerned, but no one knows to what extent their efficiency has been impaired and their resistance to disease weakened. It is probable in this respect that the effects of their sickness is never entirely obliterated.

Rural conditions in North Carolina are perhaps no worse than those that exist in other states, and it is not my purpose to convey such an impression, the prime motive of this discourse being to bring to light a situation that must be considered in any rehabilitation scheme that involves the countryside. The development of any program for social readjustment

must provide not only adequate sanitary facilities for the families that are rehabilitated, but also for the population already established in the rural areas. This is essential in order that the public health of the State as a whole may be adequately protected against disease. Rehabilitation is certain to result in an increase of mingling between the rural and urban groups of people and in enlarged communion within the established population of our countryside. Such an increase in contacts as is anticipated will be attended by an increase in the health hazards of the population of the State as a whole.

North Carolina with its varied resources and wide expanse of sparsely settled countryside is ideally endowed and suited to such an experiment in social adjustment as is contemplated by the Federal Government. Only the human resource is an unknown quantity, made so to a considerable degree by the conditions under which it exists. In any contemplated program of adjustment, therefore, due regard should be given the factors that influence and determine the value of this most important of all resources. Proper sanitation and public health measures will do much to increase and stabilize the value of the human resource and should, therefore, have a prominent part in any rehabilitation program that is undertaken.

"The Story of Tooth Decay"

By ERNEST A. BRANCH, D.D.S., *Director, Division of Oral Hygiene*

THE North Carolina State Board of Health is interested in the health of the children, and is particularly interested in the health of their mouths, because of the fact that there is a very definite relation between their mouths and systemic disease. There were about sixty thousand children who entered the schools of North Carolina this year for the first time. Quite a number of them have been examined and have been found to have unclean mouths. We

know that a child who eats with an unclean mouth is sending food to his stomach in an unclean condition.

Germs are very small living organisms of vegetable life and can be seen only under a powerful microscope. The mouth is an ideal place for them to breed. They feed upon dead animal and vegetable matter and thrive best where it is dark, warm, and moist, as it is within the mouth. The temperature is just right for them there; it is dark and there is plenty

of moisture, and if the teeth are decayed and are not cleaned, if food is left on their surfaces and in between these teeth, the germs multiply very fast indeed, millions of them being produced and swallowed every day. Many of these germs are harmless and under ordinary conditions will cause very little trouble; but if the disease-producing germs get into an unclean mouth and rapidly increase in number, there is danger of sickness.

It is well to remember that in order to keep children free from sickness it is necessary to train them (1) to keep the fingers out of the mouth and to refrain from touching food with dirty hands; (2) to see that they have sound teeth and that the food is brushed off after each meal.

If these two rules are followed, it means the prevention of much of the sickness of childhood and adult life.

It is difficult to explain how teeth decay without using technical names and words that are hard to understand, but every intelligent adult should have a reasonably correct idea about it in order to help the children to have sound teeth.

Decay of the teeth always starts from the outside surfaces of the teeth, never from the inside. The surfaces which are most frequently subject to decay are: (1) those between the teeth, where one tooth touches the other; (2) in the fissures or rough surfaces on the tops of the teeth which are used for chewing food; and (3) close to the gums where the food clings to the border of the gums.

Meat will not cause the teeth to decay, because when it is decomposed by germs an alkali is produced and the enamel is not affected by the alkali. Acids are the agents which cause the teeth to decay.

The enamel of the tooth is made of crystal-like rods, between which is a cementing substance which holds them tightly in place. This can be dissolved by acids, especially lactic acid, which is very easily formed

from sugar. When milk becomes sour it is caused by germs decomposing the sugar in the milk, thus producing lactic acid, which gives the milk its sour taste. Starchy food, if allowed to remain in the mouth, can be changed to sugar by an ingredient in the saliva. The sugar can then be acted upon by germs in the mouth and changed to lactic acid; so that it may easily be seen that to leave starches and sugars on the teeth for any length of time is to produce lactic acid, which can dissolve the cementing substance between the enamel rods. However, in order that the acid become strong enough to actually dissolve the enamel, it is necessary that it be held against the tooth surface for some time, and that is done in this way:

In saliva there is an ingredient called mucin. This substance is what makes the saliva viscid, or stringy, and is intended to lubricate the chewed food so that it may be easily swallowed. If a thin glass bottle were filled with saliva and a little lactic acid were dropped into it, it would produce a white fog which would settle to the bottom of the bottle and stay there. This white substance is mucin and is sticky like glue. When acids are formed in the mouth from the sugars and starches which have been eaten, this white mucin forms on the surface of the teeth. If there is food with many germs upon the teeth, a glue-like tent is gently formed over both the germs and the food by the mucin. As the germs decompose the starches and sugars in the food to form lactic acid, this acid is held tightly against the tooth, under the tent, and becomes stronger as more acid is formed. Now, if it remains next to the enamel for any length of time it will start to dissolve the cementing substances between the enamel rods.

The little tents are called plaques and they are formed and stay where the friction of chewing does not displace them. If we eat coarse, wholesome food and chew it thoroughly, we can keep a great many of these

plaques rubbed off the enamel. It is true that we cannot keep these plaques from forming, but it is also true that if we keep the food brushed off the teeth the germs will find little upon which to feed. We can also have all of the surfaces of the enamel polished every two or three months, for it is more difficult for them to form on smooth, polished surfaces.

It is undeniable that tooth neglect directly affects many more people and that more physical degeneracy can be traced to this source than to few other conditions. Dental caries, or decayed teeth, have been called "The People's Disease." Every day hundreds of thousands of teeth are aching. However, children who are allowed to eat constantly soft, mushy foods, cake, sweets, and candy cannot hope to have sound teeth and well-developed faces.

Diseased teeth are responsible for a vast amount of ill health. Toxemia from the swallowing and absorption of pus is probably the most serious evil of neglected teeth. Many diseases of the heart, lungs, and kidneys have been traced to decayed teeth. Every cavity is filled with decayed food and bacteria. The germs of tuberculosis and diphtheria are often found in dental cavities, and are thought to sometimes find their way into the body from this source. When teeth are decayed the tonsils are more likely to become diseased.

The causes of dental decay are definitely known, tangible, and amenable to control. Dental decay is chiefly a disease of childhood and youth. If kept in repair until the age of twenty, teeth should be sound at sixty. Neglected teeth till twenty—teeth with any tendency to decay—are beyond salvage.

Until recently the mouth of the child was to the average teacher an unknown quantity. Even the dentist and physician were not aware of the actual conditions, for the reason that a very small percentage of the children came to them for examinations.

In examining the mouths of retard-

ed children in our schools we have found great numbers of them in a deplorable condition. There are at least three kinds of influences resulting from dental decay: (1) Decreased power of mastication; (2) toxic effect of pus which is absorbed directly into the stomach and intestines; (3) reflex nervous disturbances.

Many children from six to twelve years of age are deprived of half the normal chewing surface by decayed teeth. The loss of one of the six-year molars means the functional loss of its opposite.

When we realize that the mouth is the gateway to the body, and see how it is neglected, we are not surprised that so many of our children are sick. With so many of them underweight and in a run-down condition, suffering with decayed teeth, gum boils, abscesses, and so on, it is not surprising that they naturally fail to make their grades in school. Their physical condition is such a handicap that it would be more surprising if they passed their work.

We need our teeth as long as we need the rest of our body, and they should last a lifetime. So the food, the exercise, the fresh air, the sunlight that promote the general health are also conducive to the health and long life of the teeth. When we obey the laws of health, when our diet consists of cleansing foods with their mineral salts and vitamins, the blood will be charged with life-giving material so that throughout a long life our teeth will be kept clean and strong and beautiful.

The Maternity Center Association of New York City has designated one day in the year as "Mother's Day." A Nation-wide observance of this day is planned for May 12 this year. The idea is to make maternity safer. Also, the American Child Health Association has for several years, by act of Congress, sponsored the celebration of "Child Health Day" every year on May 1. These two special days should be widely observed in North Carolina.

Allergic Diseases

Reported by W. P. RICHARDSON, M.D.

DR. JOHN A. KOLMER, professor of Medicine at the Temple University School of Medicine, summarized modern knowledge of allergic diseases before a meeting of the Forsyth County Medical Society at Winston-Salem, December 20, 1934. Allergic diseases are those which are caused by contact with some substance to which an individual is sensitized. These substances cause no symptoms in normal, unsensitized individuals.

Doctor Kolmer listed as the commonest of the allergic diseases, and those most familiar to the average person, hay fever, asthma, some cases of eczema and certain other skin conditions, dermatitis venanata (poison ivy), migraine headaches, certain gastrointestinal upsets, and serum sickness, both acute shock and the commoner serum disease with its itching skin eruption and joint symptoms. Epilepsy is also thought by some to belong to the group of allergic diseases.

The state of sensitivity, known as allergy, is developed through contact with the offending substance. The primary contact sensitizes, and subsequent contacts bring on the characteristic symptoms. Only protein substances, or those having a protein combination of their makeup, are thought to cause allergy. In the case of certain metallic drugs, which cause the characteristic symptoms in some individuals, it is supposed that they combine with some body protein to form a new protein sufficiently foreign to cause sensitivity.

Doctor Kolmer stated that human beings may acquire allergy to any foreign protein of plant or animal origin. Thus the number of substances which may be involved is almost limitless. Pollens, the products of bacteria, and animal sera are probably the three substances most fre-

quently involved, though sensitiveness to food substances is not uncommon.

There are four modes of entrance of offending substances: inhalation, ingestion through the gastrointestinal tract, entrance through the skin, and hypodermic or other injection.

Heredity plays a dominant rôle in the production of allergy, the individual inheriting not the sensitiveness, but an increased capacity for becoming sensitized. Figures given by Doctor Kolmer showed that 50 per cent of the offspring of one allergic parent and over 60 per cent of the offspring of two allergic parents develop manifestations of allergy by the age of 30 years.

Treatment by so-called desensitization was discussed. This has been attempted by treatment with some protein preparation having no relation to that to which the individual is sensitive, and by treatment with carefully graded doses of the substance itself. Only the latter holds much promise of success, and its success depends first of all on an accurate diagnosis of the offending substance.

In making this diagnosis the first essential is a careful history and physical examination. After that, skin tests are of great value, although their limitations must be kept in mind. They do not react to the offending substance in some cases, and in others give false reactions.

The most satisfactory and effective treatment, if that is possible, is complete avoidance of the offending substance. Of course in many cases this is impossible, and then treatment by desensitization should be attempted. The use of adrenalin to control symptoms is only temporary symptomatic treatment, and can in no wise take the place of treatment based on the specific cause if that can be found.

North Carolina Emergency Nursery Schools

*By MRS. MARY G. SCARBOROUGH, State Supervisor of Nursery Schools
and Parent Education*

IN October, 1933, Mr. Harry Hopkins, director of the Federal Emergency Relief Administration, said: "It has been brought to my attention that young children of pre-school age in the homes of needy and unemployed parents are suffering from the conditions existing in the homes incident to current economic and social difficulties. The educational and health programs of nursery schools can aid, as nothing else, in combating the physical and mental handicaps being imposed upon these young children." The Federal Emergency Relief Administration then asked the National Office of Education whether nursery schools could provide a means for employing needy and unemployed teachers. The answer to this question came in the statement of October 23, 1933, when Mr. Hopkins announced that the nursery school would constitute the sixth of the Emergency Education Programs. Fifty nursery schools were opened in Porto Rico, ten in the District of Columbia, and one thousand one hundred seventy-eight in the United States. Of this number, fifty were established in North Carolina—fifteen for Negro children and thirty-five for white children.

Each nursery school program provides for physical, mental, emotional, and social development of the child. Realizing that this training would be inadequate unless it were supplemented by similar home training, parents of the nursery school children are required to attend Parent Education Classes. In these classes a simple course of study, taking up the everyday problems of the parents, teachers, and children, is followed. Free discussions of practical problems are held.

During December the State-wide slogan for the Emergency Nursery School was, "A Happy Christmas for

Everyone." Every nursery school reported that the slogan was realized, due to the hearty coöperation of the local communities where the nursery schools are located. In January the old slogan of happiness was retained, and to it was added the new slogan, "An Hour of Sleep in Individual Beds for Every Nursery School Child." Again the local community coöperated in securing individual beds, and again the slogan was realized all over the State.

The slogan for February was, "Not a Common Cold in a Nursery School." Every precaution was taken to protect these children from colds. Every child was given cod-liver oil to build up his resistance, and a well-balanced meal was served in the middle of the day. A program of outdoor play in warm suits and an hour of sleep in comfortable beds did much to reduce the number of colds. This slogan extended into the homes, and at least twelve hundred homes in North Carolina put on an intensive program to prevent the common cold, so prevalent during the winter months.

The slogan for March is, "Perfect Parent Coöperation." Through this slogan the teachers hope to secure better attendance at Parent Education Classes, better home coöperation, and a better understanding between teachers and parents. Therefore, by keeping the old slogans and adding a new one each month the nursery school is gradually building up a program that makes for better physical, mental, emotional, and social welfare of the boys and girls. Realizing the wisdom of the old adage "Train up a child in the way he should go," it is hoped that better habits, attitudes, and appreciations may be established, that the citizens of tomorrow may develop into the highest type of individual of which he, with his native ability, is capable.

1935 Child—1935 Parent

By CORA BEAM, R.N.

The Child—two kinds, your child and my child.

The Parent—two kinds, you and me.

Doctor Crumbine of the Child Health Organization in a radio talk, January 22, 1935, asks 1935 questions.

First of four questions for the 1935 child:

Do you have a yearly physical examination made of your child?

Do you have a yearly physical examination of your child to know that he is in good condition—his heart, his lungs, his ears, his eyes, his throat? Is he nourished and growing as every child should be doing at all times? This examination done preferably by your physician. In this examination, if defects are found, do you have these taken care of as you would should you find a defective part in your car?

Second of the four questions:

What protection do you give the 1935 child?

The 1935 parent with the right protecting attitude would see that there would be no more danger of epidemics of diphtheria, smallpox, or typhoid fever, and see that he is protected against exposure to the commonly known contagious children's diseases. Keep your child at home, when he has symptoms of infection of throat or colds, until you know he is all right. If all children were kept in, at home, when symptoms of disease appear, there would be no need of fear of measles, scarlet fever, and other epidemics of the "children's diseases." Protect the 1935 child.

Third of the four questions:

Have you the 1935 food attitude for your child?

Your child must have food that keeps all parts of the body in good condition. Is your child hungry with a hidden hunger for something that tells only in an obscure way? Perhaps for financial reasons there must be a reduction made. There has never been a substitute for milk or

vegetables, and this should never be considered. And there still may be the hidden hunger with other causes that need looking into, other than shortage of substances. The gasoline at the filling station does not run the car until it is in the car's gasoline tank; the 1935 child, to grow right, must be taken care of with 1935 food ideas.

Fourth of the four questions:

What are you doing to help your child grow up?

If he is not doing his job, chief of which is to grow up, there is no exchange to be made. You may trade or discard your car, but not your child.

Then Doctor Crumbine gives another list of questions:

Are you a friend to your child?

Do you give him a place in your home?

Does he have chores of his own?

How much praise and approval do you give him?

Does he have books and a place of his own to read them?

How strong is his body?

What education is he getting?

Are you the parent for him to model after?

Would you like for him to be like you? with apology.

I wish I could have taken, word for word, Doctor Crumbine's talk. Most interesting to me, as I listened to it the first thing when I got in from work this evening, to hear him—the great doctor that he is—talk in this simple way about the things we nurses in our small way, day after day, dig away at and wish so much that the day would come when all children can be Doctor Crumbine's 1935 children, and all parents his 1935 parents.

Don't you think when North Carolina gets health organizations 100 strong that we might get our children better under the yearly watch-care of the physicians of the State?

Public Health's Platform for the Preschool Child in North Carolina

The policies of the North Carolina State Board of Health in reference to the infant and preschool child are outlined below. If these policies are properly followed they will help in:

1. Providing for every child born a sound mind and a sound body to compete for his place in the world;
2. Providing the best medical and dental care;
3. Preventing State and Federal medicine;
4. Improving the public health.

In such a procedure the proper place to start is:

1. With the child before birth, which means competent medical prenatal care;
2. With the child at birth, which means competent medical obstetrical care;
3. With the child in infancy and during the preschool years, which means (a) proper food and food habits, (b) proper health and health habits, (c) protection against the preventable diseases, (d) prompt medical and dental corrective and curative measures when illness occurs. Competent medical and dental supervision during this period determines the success of this program.

The accomplishment of such a program needs the coöperation of the following:

Parents and Guardians

Their part is—

1. To assure that each child born be as free as possible of physical and mental handicaps;
2. To secure competent medical prenatal and obstetrical care;
3. To secure protection against the preventable diseases;
4. To provide prompt medical and dental supervision during illness.

Thus the parental duty to one's child becomes a service to the community.

Physicians and Dentists

Their responsibility in such a program is—

1. To advise and insist upon measures to keep well;
2. To advise and insist upon measures to get well.

Governmental Agencies

Their responsibility is—

1. To provide funds sufficient to assure medical care for the proven indigent, such plan of care to meet the approval of the organized medical profession;
2. To provide funds adequate to promote the application of approved public health procedures.

Public Health Officials

Their responsibility is—

1. To furnish leaders in such a program through education by bulletin, press, radio, and field work;
2. To provide, upon request, expert consultation for communities and individuals;
3. To promote general sanitation and local health services;
4. To provide adequate laboratory facilities for examination of samples of water and milk, and of specimens from patients for diagnostic purposes;
5. To furnish prophylactic agents for distribution;
6. To act in a supervisory and an advisory capacity over all public health activities, either State or local.

It is American for every child born to have equal protection against infectious diseases and to be physically and mentally fit to compete for his place in the world!

**PREVENT THE PREVENTABLE!
CORRECT THE CORRECTABLE!
CURE THE CURABLE!**



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MAY, 1935

No. 5

SUN-BATH DEMONSTRATION AT THE BABIES' HOSPITAL



A BLESSED RETREAT FOR SICK BABIES

Dr. J. Buren Sidbury, of Wilmington, who operates the Babies' Hospital at Wrightsville on the coast near Wilmington, again supplies our front cover for May. For several years Doctor Sidbury has sent us an original photograph for this purpose. This photograph, made last summer, demonstrates the method of giving sun baths to babies at the Babies' Hospital.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
Diphtheria	Malaria	Typhoid Fever
Don't Spit Placards	Measles	Typhoid Placards
Eyes	Pellagra	Venereal Diseases
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough
	Sanitary Privies	

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters)	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Minimum Standards of Prenatal Care	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Breast Feeding	Instructions for North Carolina Midwives.
Infant Care. The Prevention of Infantile Diarrhea.	
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Notes and Comment

By THE EDITOR

FOR many years the month of May has been notable for the emphasis which has been placed by many organizations throughout the country on care for mothers and babies. It is a month which nearly always in North Carolina records a sharp upturn in infant deaths. It is a month in which the houseflies make their appearance in full force. Generally there are some hot nights. There are many hot days with cooler nights; and for very young babies the transformation from the care given during cooler months, in order to be adjusted to changing climatic conditions and to resistance to infections of various kinds, makes it a difficult month for infants.

Many years ago the American Child Health Association succeeded in getting a resolution passed through Congress setting apart May 1 as "Child Health Day." The idea is to emphasize the things that may be done to make babyhood safer. Later on a Philadelphia woman originated the idea of "Mother's Day." A resolution concerning that was also passed by Congress setting aside the second Sunday in May as "Mother's Day."

In the columns of THE BULLETIN for May we always endeavor to present the facts with reference to child health conditions in our State. We also try to present as much information on how to safeguard the health of the babies as space will allow. This month we labor in a depressing atmosphere. It is no use to try to

enumerate the reasons. We do not mind saying, however, that we have labored for the past two years here under adverse circumstances. It takes some money to provide the kind of constructive work child-saving measures necessitate to teach the large number of new mothers—many of them ignorant and unlearned—about the safeguards necessary for the care of infants. Every one connected with the State Board of Health and the different city and county boards of health during the past two years has been laboring under the handicap of inadequate funds. The year 1934 registered a material increase in the number of infants dying under one year of age—the largest increase which has occurred in any year in a long time. Only a cowardly people, however, lose courage and lay down and quit. There is nothing, therefore, for one to do but to take heart and try again and keep on trying.

To prevent needless infant and maternal deaths in this State requires several things: first, there must be an extension and an expansion of competent medical prenatal service to the expectant mothers who have heretofore not been getting it; second, information of the right kind must be placed in the hands of young mothers telling them in plain language of the experience in the past and of the things to do and not to do in order to rear a healthy baby; third, community sanitation, and therefore community safeguards,

must be better stressed and more widely employed. All the forces for civilization must be brought into play all along the line if we are to prevent the needless sacrifice of infant life.

* * *

WE are publishing a short article elsewhere in this issue written by Dr. W. Z. Bradford of Charlotte. We requested Doctor Bradford to write this article, setting forth briefly some of the things that have been done in Charlotte, during past two or three years particularly, for the extension of competent obstetrical service to the extremely poor classes of that city. We would like to call especial attention to the following paragraph, which we quote from Doctor Bradford's article:

"The lay campaigns for maternal and infancy welfare heretofore have focused popular attention upon the abnormal, the neglected, and the mistreated, and hence the dangerous phases of child-bearing. The result has been a tendency to ignore the security with which the pregnant woman can be surrounded, provided she places herself in competent medical hands at the onset of pregnancy."

We wish to emphasize the foregoing statement. It is a clear-cut statement of the desirability of positive health. It is a statement which presents clearly the safety with which this period may be approached by the expectant mother, provided she is in competent medical hands from the beginning of her pregnancy. Doctor Bradford is right in calling attention to this tendency: there is great danger in over-emphasizing the perils incident to childbirth and things which beset the child in its earlier days of life.

To our mind the work of the Charlotte Maternity Clinic represents an ideal arrangement. Doctor Bradford, assisted by Doctor Nance, and with the full coöperation and leadership of the Charlotte and Mecklenburg County Health Department, has made a notable contribution to current medical history. They have an arrange-

ment there through which the senior class of Duke University Medical School keeps two senior students on duty in the health department office day and night to attend the confinement cases among the poverty-stricken class of the city. This is financed by the Charlotte Health Department, and Doctors Rea and Hand and the nurses in that department should be commended for their unselfish labors in organizing this work.

Doctor Bradford and Doctor Nance have given their services free of charge to the poor of that city for several years. Their work cannot be praised too highly. The work is practical. It is simply extending competent prenatal medical service, which should be extended to the women in every township of North Carolina, to an indigent class of women that would find it hard to secure such service otherwise. It is impossible, of course, for any medical school, even though there were more graduate schools in the State, to supply students for all the larger cities and towns; but it points in the right direction.

The work Doctor Bradford and his associates are doing there points the emphasis to his statement, that the pregnant woman can be assured of security, provided she is in competent medical hands. Let us hope that the day will soon come when every expectant mother in this State may have the services of a competent medical attendant to advise with her from time to time during the entire period of her pregnancy and to see her through the confinement.

* * *

WE have not had the opportunity of tabulating and classifying infant deaths which occurred in North Carolina in 1934. In 1933, however, about 48 per cent, or nearly one-half, of the infants who died under one year of age died before they were thirteen days old. This one fact, to our mind, is positive proof that one of the causes of the high infant death rate in this State is the lack of pre-

natal and competent obstetrical service at the time of childbirth. As pointed out before in these columns, a newborn baby is one of the most perfect machines upon which the human eye can look. It is a divine creation. Provided the parents are in good health, the normal baby at birth is a machine which is far more perfect than the finest mechanical device ever executed by the hands of man. So, if nearly half of these babies who succumb before the end of the first year die before they are two weeks old, it is positive evidence that they have been carelessly and ignorantly treated, or they would not have succumbed so quickly.

Health education—and we mean genuine health education, not accentuated on a few fads or devices, but comprehensive health education—is the most vital need of the people of our State at present. There is today more misinformation and more damaging advice being handed out by irresponsible quack columnists in the newspapers and by sordid and greedy commercial enterprises over the radio than at any previous time in the world's history. One of the needs of the people in this State today is

to learn to refuse to listen to much of the stuff that is proclaimed over the radio particularly, as well as to a great deal of the stuff that is printed under the sacred guise of health by some newspapers and so-called magazines. A skeptical "you must show me" attitude is vitally needed. A good question to ask one's self, when a golden voice comes rolling in over the air proclaiming supernatural powers of some dirty salts combination, is, Who is sponsoring this preparation? and What are they getting out of it?

There are plenty of authentic sources of information on health matters without people having to place their confidence in questionable sources, only to be betrayed. If you are in any doubt whatsoever when you hear advice given over the radio on medical matters, or when you read a column in some so-called magazine offering cock-sure advice on everything in the world even remotely relating to health education, you can settle the matter by writing a postal card to your State Board of Health and making inquiry. There is no use in anyone being humbugged in health matters in North Carolina, unless he wants to be.

An Indictment Against Some Fathers

ALMOST exactly one-third of the women in North Carolina who give birth to children have the services of midwives and never consult a physician throughout the entire period unless it be for some acute condition not generally related to their pregnancy. Of the remaining two-thirds, who are attended by physicians, about half of them call the physician at the onset of labor, or engage him just a few days before expected confinement.

Most physicians believe—and not without justification—that a large majority of the husbands of the aforementioned classes of women could make arrangements for ade-

quate medical service for their wives if they really wanted to do so. They believe that such service could be secured and paid for if such husbands were willing to work and make the necessary sacrifice.

We are confirmed in the above opinion by reading a report for the month of January this year of the Red Cross nurse in charge of the Cumberland County Chapter. For several years, in connection with her work, this nurse has been conducting a maternity center in the city of Fayetteville. In her report for January, under the heading "Daily Work," she made the following statement:

"The work this month has been mostly prenatal. This has included registering expectant fathers who are on relief work, so that they may be given an additional day's work each week to secure an order to make adequate provision for their wives' confinements. The reaction of some of these men is very interesting. Here they have all the leisure time in the world, and the chance to use some of it to give their wives the best service; but some are turning back to midwives, whom they can impose upon by using free of charge, rather than work out twenty dollars to pay for medical care."

The foregoing statement is enlightening and at the same time discouraging. Unless some of these men, those who are not even willing to work one day in the week, when they have nothing else to do, will work in order to save enough money to provide medical service for the sole benefit of their wives during labor and for their own expected offspring, they should be made to do so, and the proceeds of the work should be held in escrow for this purpose.

Here we have the spectacle of the relief department, at public expense, offering men pleasant and easy work, with good pay and short hours, the money to accumulate for the sole benefit of their wives; and yet the contemptible, lazy scoundrels refuse to do one extra day of work in the week for this purpose, but prefer to loaf and sponge on somebody else.

The files of this office are literally filled with complaints of poor, helpless midwives from all over the State of North Carolina, who write here beseeching us to help them collect their dues for service to the wives of such men—sometimes one dollar, sometimes five dollars. Some of these midwives report that they have served on two or more occasions, each time being promised faithfully that they should be paid. They stay as many as eight or ten days; they do the family wash; they wait on the helpless mothers and their infants; they prepare food for the miserable

scoundrels posing as husbands and fathers—only to be denied the small pittance promised them.

The report of the Red Cross nurse clearly proves the deliberate intention of some of these men who turn to the midwives for the sole purpose of securing their services free of charge, knowing that those helpless individuals cannot collect a cent from them. All practicing physicians know there is a kind of camaraderie which exists between the midwives and their helpless patients. In such cases the midwives serve just as much for the sake of humanity as the physicians who give their services free to the needy poor.

Sometime ago we received a letter from a woman stating that she was the wife of a tenant farmer. She said that she had given birth to eleven children. Two years ago she appealed to us for aid. We sent her literature and suggested that she make an appeal to a local physician to attend her during that period, which was her eleventh labor. The other day we received another letter from this same woman, stating that she is now pregnant again and expects to be confined soon; that she could not pay the doctor who attended her two years ago anything; and that she wants to try to get another doctor this time. We wrote and urged that she and her husband arrange somehow to get some compensation for the doctor who was good enough to care for her two years ago, go to him and pay what they could, and then ask him to come to her this time, with the definite understanding that her husband will pay the doctor something each week until he is paid in full.

We know there are thousands of such people in the State who have so little income that they seldom have a margin of more than a few dollars in any year; but we think that such people could make some sacrifice, by extra work, to pay at least something to the doctor who is so frequently called to save the lives of their wives.

Safeguards For Mothers and Infants

Brief Description of the Great Work Being Done At the Charlotte Maternity Clinic

By W. Z. BRADFORD, M.D., *Charlotte, N. C.*

THE relative safety to mother and child of conservative obstetrics, provided abnormal conditions are recognized and adequately treated during their incipency by intensive prenatal care, has been repeatedly confirmed by investigators of maternal mortality statistics. That the act of child-bearing is a normal process upon which the average healthy woman can embark with every assurance of success in the outcome to both herself and her child is a fact that needs emphasis at this time. The lay campaigns for maternal and infancy welfare have focused popular attention upon the abnormal, the neglected, and the mistreated, and hence the dangerous phases of child-bearing. The result has been a tendency to ignore the security with which the pregnant woman can today be surrounded, provided she places herself in competent medical hands at the onset of pregnancy.

Intelligent prenatal care with its attention to the hygiene of pregnancy, with its early recognition of such diseased states as toxemia, heart, blood vessel, and lung disease, with its prompt treatment of nutritional and constitutional defects, followed by conservative conduct of labor, the intelligent choice of analgesia and anæsthesia and a minimum of operative interference, and finally climaxed with proper post-partum care, supplants medieval midwifery with the art and science of Obstetrics. Safety, permanent health and happiness are the end result of this science. Education of the masses to the dangers of the abnormal states complicating pregnancy, to the terrible possibilities of neglect and mishandling, while possibly effectually lowering mortality rates, can carry in

its wake a most distorted attention unless the basic truth is reemphasized.

The application of these principles on a somewhat larger scale than possible in any one physician's practice, but with the same margin of safety, is aptly demonstrated in the Charlotte Maternity Clinic. This clinic offers maternal care to indigents only and deals with the strata of society in which a high incidence of syphilis, heart disease, nephritis, tuberculosis, and toxemia of pregnancy occurs. In spite of the increased risk in this class of the public, the clinic during its first two years, 1932-1934, delivered 1,076 patients with a mortality rate of 2.5/1,000 in the group of 790 women who availed themselves of the services of this clinic before delivery. At the same time, in the group of 286 women who were seen for the first time in labor, the mortality rate was 18.0 per 1,000 births, raising the rate of the entire series to 6.5 per 1,000. This comparison is most striking and only serves to re-emphasize the established fact of the value to the patient of medical supervision throughout the entire period of pregnancy.

Only 38 of the 1,076 patients were delivered by operative measures, resulting in an incidence of spontaneous deliveries of 96.5 per cent. The infant mortality rate of 4.7 per cent (51 stillbirths), when corrected by the elimination of those infants macerated at delivery where death occurred prior to the onset of labor, was 2.3 per cent.

Syphilis producing a positive blood Wassermann occurred in 198 (18 per cent) of these patients. The value of anti-syphilitic treatment, especially from the standpoint of the infant, is

apparent in the following statistic summary of this group:

tality rate can be lowered to that irreducible minimum which is the

	Miscarriages	Still Births	Living Infants	Per Cent Pregnancies Fatal
0 Neoarsphenamine	8	13	34	38 %
1 Neoarsphenamine	2	2	19	17 %
2 to 8 Neoarsphenamine.....	3	4	71	8.9 %
Neoarsphenamine (8) and Bismuth..	0	1	41	2.3 %

The brief summary of 1,076 deliveries above outlined again brings to our attention the fact that even women of the lowest social and economic strata can be guided through childbirth with comparative safety. Organization of available facilities and mass education is required to force this class to avail themselves of medical supervision, but once a community is "breeding conscious" the mor-

goal in every field of preventive medicine. Fear should not be the basis of this campaign, but rather safety—in summary, the ideals of the Children's Charter of the White House Conference: "For every child full preparation for his birth, his mother receiving prenatal, natal, and postpartum care; and the establishment of such protective measures as will make child-bearing safe."

Infantile Diarrhea

By J. C. KNOX, M.D., *Director, Division of Epidemiology,
North Carolina State Board of Health*

WITH the approach of hot weather, serious thought should be given to the condition commonly known as "summer diarrhea" in children. Diarrhea as found in infants is not confined to the summer months, but may occur at any time during the year. The peak of incidence, however, occurs in the hot months, and at this time there is a greater chance for a much more severe illness with a very marked increase in the mortality.

Public health officials have done much in the last few years to lessen the chances of babies contracting this type of illness by urging the installation of safe water supplies and sewerage systems of an approved type and by their efforts in securing clean and safe milk supplies. The full responsibility for prevention of these gastro-intestinal disturbances does not fall upon the public health officials, however, but much of it rests with the parents themselves.

In preventing any illness it is necessary to know the cause and the

mode of transmission before intelligent measures can be applied which might reasonably be expected to accomplish their purpose. The diarrheas of infants and young children may be divided into two main groups: conditions without infections, which are the most common, and conditions associated with infections.

In this first group the cause is varied and it is most commonly characterized by vomiting and diarrhea. The improper feeding schedule is probably the most common cause of gastro-intestinal upsets in early infancy. Babies that are breast-fed will develop these conditions when they are fed at too frequent intervals. This is commonly known as "overfeeding." A baby is oftentimes nursed at any time that he cries. This is not necessary and is in fact positively harmful. Babies should be on a regular schedule, followed out rather closely by the clock. Ordinarily there is no necessity for feeding a baby at intervals of less than four hours apart.

Even this schedule may be lengthened in certain cases when a child requires food less often. Feeding of every baby is an individual matter. His schedule has to be adjusted to him and his needs.

Vomiting and diarrhea are less likely to occur in the breast-fed infant, particularly if the proper time schedule of feeding is diligently followed. It is true that occasionally the mother's diet will affect the baby and at times may cause vomiting or even diarrhea. Experience alone will enable her to know whether certain foods agree with her baby or disagree with him. It is well to keep in mind that an infant is an individual, and as such may have individual peculiarities; in other words, what agrees with one may not agree with the other. There is no individual more imposed upon than the baby. Mothers will force various concoctions into a baby upon the recommendation of some neighbor who has heard that somebody else has used it successfully. Of course the child is not large enough physically to fight back and cannot defend himself against such injustices. The sooner the parent realizes that the infant's dietary is due careful supervision by one trained in this particular type of work, the less danger there will be of gastro-intestinal illnesses.

In breast-fed infants the same condition may develop, due to the fact that a child is kept on the breast for too long a time. It is not uncommon for children to be breast-fed considerably longer than a year, even up to two years of age. This is not advisable and may be more harmful than not. Ordinarily, infants should be weaned sometime between the ninth and twelfth month, and at this time a baby's diet should be supplemented by the addition of cereals, vegetables and fruits, and other foods. Those babies that remain on the breast for too long a period become pale and anemic and often will not take any other food unless the child is separated from its mother. These little fellows are very susceptible to infec-

tions of all sorts, and once serious infection is contracted it may terminate fatally. Mothers as a rule show considerable concern at this time over any prospective change from the breast to some artificial milk formula. They think that the baby in his weakened condition cannot stand a change, and they never seem to realize that such a change is absolutely necessary to the child's welfare.

Improper foods—those not suited to the baby's digestive apparatus—are probably the next greatest cause of diarrhea in infants. Oftentimes babies are fed directly from the table at the amazingly young age of two and three months; in other words, their dietary consists of those things that the parents eat and in quantities that are alarmingly large. Most often there is no distinction made in the method of cooking these foods, as to whether they are fried or boiled, and it goes without saying that babies fed in such a manner are more prone to upsets than would be the case if they were limited to proper milk formulas and cereal and vegetable preparations.

Excessive heat that occurs in this locality during summer is enough within itself to be the primary cause of diarrhea in many instances. Of course, one can readily see that the combination of the heat, improper food or feeding schedules account for a considerable number of cases of this particular illness. Even the overheating of homes and the overdressing of these youngsters in winter is responsible for a certain amount of the milder gastro-intestinal illnesses, but of course they do not reach the seriousness of these conditions as when they occur in the summer months. It is safe to say that the majority of babies are kept too warm in winter and would be much better off if this were not the case.

Quite often infections not of the intestinal tract will cause vomiting and diarrhea of such degree that the real cause of the condition is overlooked and may be entirely missed for a long time. During the season for

colds and upper respiratory infections the greatest number of gastro-intestinal conditions are caused by infections of this nature—colds, sore throats, middle-ear abscesses, and nose and throat infections. It is customary for parents often to insist upon changes in the diet of the child in order to correct vomiting and diarrhea that are due to these causes. However, when these infections are cleared up the vomiting and diarrhea cease without specific treatment.

Another condition which should not be overlooked is that of pyelitis. This is particularly prevalent in girl babies and is often associated with vomiting and diarrhea, sometimes masking the true cause of the illness. Alteration in diet for conditions of this sort will not have any effect whatever on the gastro-intestinal disturbance.

Babies who are artificially fed are more likely to develop diarrhea than those that nurse the breast. Of course, at the present time there are fewer babies breast-fed than artificially fed, but we have no control over this situation. However, a baby receiving inadequate nourishment at the breast is much better off on an adequate, correct formula for artificial food. Greater safeguards should be thrown around the baby who is artificially fed than around those who are fed from the breast. This of course is due to the fact that their chances for developing gastro-intestinal disturbances are greater than in the other infant. It is in this group of children that the more serious upsets may and usually do occur.

It is necessary that the bottles and feeding containers of these babies be kept scrupulously clean. They should be sterilized each time before being used. Even though a clean milk supply is available, if the bottles are not clean, or if contaminated water is used in washing these bottles, they may still carry infection to the baby. Each handling of the milk intended for an infant increases the possibilities of its becoming contaminated before it reaches him.

The second group of conditions are those found primarily in the intestinal tract, due to infection with the dysentery bacillus. The dysentery bacillus is not normally found in milk. It must be introduced by someone who handles the milk before it is fed to the infant. This type of infection is more common in summer and is usually contracted through contaminated or infected food, which of course includes milk, or through water or foods contaminated by flies. All artificially fed babies should have milk boiled for at least three minutes until the baby is two years of age. An infant should never be given raw milk. Of course some babies are given milk that is not boiled or pasteurized and never have upsets of a gastro-intestinal nature, but the chances for serious disturbances of this sort are much greater when raw milk is used than when milk used is boiled or pasteurized. This is particularly true in the summer, for inadequate refrigeration is conducive to the growth of bacteria which are present in milk. Oftentimes milk that has been boiled and is not kept at the proper temperature in summer will cause vomiting and diarrhea in children. Also, unclean milk, even though it has been boiled, when given to babies may result in serious digestive upsets. The bacillus that causes dysentery grows readily in milk. Especially is this true when the milk is not kept cold. These little organisms multiply so rapidly that they are increased, under these ideal conditions, to such an extent that the milk may become an instrument of death rather than the clean, safe food which it appears to be. The appearance, taste, and odor of milk are not indications as to its purity, from the standpoint of the bacteria that may cause serious illness.

Water always should be boiled before it is given to a baby, and in this instance we refer again to children under two years of age. Boiled water may be made more palatable by the simple process of shaking it in a sterile container, which dissolves a

certain amount of the air in it. Water also may carry these deadly germs, and it is for this reason that the use of boiled water for babies is strongly urged. It must be remembered that the dysentery bacilli are found in great numbers in the intestinal discharges, and it is from these discharges that the infection is always spread.

When a child has dysentery or colitis the soiled diapers should be sterilized thoroughly and protected from flies. Of course flies are more com-

mon in summer than at any other season of the year, and it is necessary to prevent their entrance into the home. Screening will accomplish this. Those who care for babies that are sick with a condition of this sort should be scrupulously clean, particularly where it is necessary that they handle foodstuffs before it is eaten, for it is in this manner that other cases may arise. One cannot be too careful in following out these simple precautions, and may thus avoid the spreading of this disease.

Gift of Health

By MARY S. BATCHELOR

SINCE the days when the fairies gathered around the cradle of the little Sleeping Beauty to present their gifts of much joy and a little woe, mothers have searched through the treasures of the earth, choosing and rejecting for their own children. Whether the baby be the first-born, in all his glory, or merely the sixth in a family of girls, you may be sure that the mother wants for her child the best gifts life has to offer. The wise mother knows that the so-called "fairy gifts" of beauty, charm, gaiety, and grace are in reality the outward manifestations of a radiant state of health. She knows that health itself is the one gift which is most truly hers to bestow upon her child, and that to those who possess health all things are possible. With this knowledge before her, she will strive to build for her child a strong body, filled with an abundant vitality, which will enable him to meet the demands and problems of life, ward off disease and death, and take him, with a sure and cheerful saneness, through a happy childhood and productive manhood into a tranquil old age.

To reach such a state of health, there are certain things which the baby must have: A good start in life, proper food, proper training in

health habits, protection against communicable disease, and adequate medical and dental attention.

To give the baby a good start in life the expectant mother should look to her own health during her pregnancy. Particular attention should be given to her diet. By the fourth month of pregnancy the caps of the baby's teeth are forming in his jaws and their subsequent state of health depends in a large measure upon the materials with which they are built. Foods containing calcium, phosphorus, and minerals, so necessary for the building of teeth and bones, should be plentiful in diet of the expectant mother, for it is through the diet of the mother that the unborn child draws the substances which are essential for his growth and well-being. Consequently, the mother should do all within her power to keep herself in excellent physical condition in order to supply her baby's needs.

Following the birth of the baby, she should make every effort to nurse him. It is a proven fact that breast-fed babies have a much better chance in life than have babies who are artificially fed. She should also remember that as the baby grows and develops he will need additional food. By keeping in close touch with her

physician and following his instructions as to supplemental feedings, she will assure her baby of food sufficient to adequately maintain his small body and allow him a reserve upon which to draw.

Contrary to general opinion, it is never too early to begin training the baby in proper health habits. In fact, the sooner the training is begun the better for all concerned. During the first few months of the baby's life care should be taken to help him form regular habits of sleeping, eating, and elimination. It is all too true that the baby will form habits during his infancy and childhood which will stay with him all his life. The mother should make it her responsibility to see that the habits he forms are good habits, that they are health-building, rather than health-destroying.

When the baby reaches the age of six months the natural immunity against diphtheria which has been his since birth will begin to leave him, and he should be immunized. Unless he is protected against diphtheria at this age he may fall an easy victim to the dread disease. At the age of twelve months he should be vaccinated against smallpox. Smallpox and diphtheria are two diseases which would be wiped entirely out of North Carolina if every child born in the State were immunized against them early in life. When every mother realizes that early immunization protects her baby, and when she determines that he shall have all the protection which it is possible to give, then smallpox and diphtheria will cease to menace the lives of the children of this State.

From the day of his birth the baby should be under the care of a competent physician. During the first year of his life he should be taken to the doctor at regular intervals of once a month. The doctor will then be able to detect danger signals and defects which may cause later trouble. Remember, it is much easier to keep a child well than it is to cure him after he becomes ill.

As soon as the baby's first set of teeth come through his gums, he should be taken to a dentist and any cavities should be treated and filled. It should be remembered that upon the care given the first teeth the welfare of the permanent teeth depends. See to it that mouth-breathing and thumb-sucking are not allowed to continue, for they will spoil the shape of the child's face. See to it that the six-year molars are not allowed to become decayed and lost.

The principles of health are known; the rules are simple; yet, in their constant and unvarying application there is much of monotony. Just as there is no royal road to knowledge, there is also no royal road to health. The principles of hygiene must be practiced every day. However, the way is made much easier if the rules are made a matter of habit from birth.

A long life, a life filled with an aggressive, abounding sense of well-being and joy, is a worthwhile life. There is not a mother alive who would exchange for her child other and more doubtful blessings for the actual fulfillment which is brought by her own gift to him of health.

RECIPE FOR HEALTH

By DUBOSE CECIL, *Women's College,
University of North Carolina*

Grow, little children, stronger,
stronger.

Sleep, little children, longer,
longer.

Eat fresh vegetables every day.
That will keep ill health away.
Have fresh air and plenty of water,
Exercise as children ought to.
Do these things, and you will see
How healthy you will be.

Drink rich milk every day,
Brush your teeth, run and play.
Stand up always like a man,
Do your work the best you can.
Have your fun—but study, too—
These should not be hard to do.
Do these things and you will see
How healthy you will be!

(Can be sung to the tune of "Glow Worm.")

The Conquest of Diphtheria

By WILLIAM P. RICHARDSON, M.D., Assistant Director,
State Laboratory of Hygiene

DIPHThERIA is one of the oldest diseases known. From clinical descriptions in the Talmud we know that it existed among the Jews several centuries before Christ, and was greatly feared by them. Epidemics of what was most certainly diphtheria are described in the writings of Roman physicians of the second, third, and sixth centuries A.D. It was first recognized as a definite clinical entity in 1492, and during the next several centuries it was widely epidemic in various European countries, especially in Spain. It occurred in America as early as 1659.

The name "diphtheria" was given the disease by a French physician, Bretonneau, in 1825. Bretonneau was the first to relieve the choking of laryngeal diphtheria, often called membranous croup, by opening the throat below the point of obstruction, an operation called "tracheotomy."

The modern conquest of diphtheria began with the discovery of the diphtheria bacillus by the German bacteriologist, Loeffler, in 1884. Since that time progress has been very rapid, and there is no other disease for which we have so complete a group of specific products by which to determine susceptibility, bring about immunity, and treat the disease after it has occurred.

Diphtheria antitoxin was introduced in 1894 by another German, von Hehring, who also introduced immunization by toxin-antitoxin mixture in 1912. The Schick test for determining whether or not an individual will take diphtheria if exposed was introduced by Schick in 1913. In 1924 Ramon, at the Pasteur Institute in Paris, developed toxoid for protective vaccination, a product which immunized a higher percentage with two doses than toxin-antitoxin did with three. In 1933 the latest improvement in our method of

immunization was introduced by Dr. Havens, director of the State Laboratory of Alabama. This improvement was alum-precipitated toxoid, with one dose of which we are now able to protect from 95 to 100 per cent of children.

I cannot leave this discussion of the history of diphtheria without paying a tribute to Dr. William H. Park, director of the New York City Laboratory, through whose efforts all of these new products except the last were introduced into America and popularized here. Furthermore, Dr. Park and his coworkers have also made some notable contributions through the improvement of methods of producing and standardizing the various products.

This history of the development of our knowledge of diphtheria and the discovery and improvement of the agents by which we can control this dread disease is one of the most romantic pages of medical history. When we stop to consider how completely equipped we are to fight it, we cannot help but wonder how it comes about that diphtheria is still a prevalent disease. We can diagnose the disease by finding the diphtheria bacillus in the throat. Further than that, we can find the bacillus in the throats of those persons, most important in its spread, known as carriers, who harbor the bacillus but are not themselves sick. We can determine by the Schick test those people will take the disease if exposed, and with toxoid or alum-precipitated toxoid can render them immune. By use of antitoxin we can successfully treat patients with the disease. And with all that, in North Carolina last year, over two hundred persons, most of them children, died of this disease.

There are some significant facts which we must keep in mind regarding diphtheria as it occurs in our

Southern States. The most important of these is the age period of greatest mortality. In a study made recently of diphtheria mortality in five Southern States, including North Carolina, it was found that 70 per cent of all deaths occurred under the age of five years. This is quite different from the picture in a group of five Northern States which were studied for comparison. In the Northern States only 42 per cent of the deaths were under five years. We are not, as parents, particularly interested in the scientific reasons which may account for such a difference, but we are vitally interested in the implications it carries in regard to our immunization program.

From the beginning of our emphasis on immunization, a large amount of our mass immunization has been carried on in the schools, because there we had the largest groups already assembled and easily reached. When we consider the fact that nearly three out of every four children who die of diphtheria die before they reach school age, we realize that we are practically guilty of locking the barn after the horse is stolen, so to speak, when we wait until the children start to school before immunizing them. We must concentrate our efforts earlier than that.

Immunization should be done as soon after the child reaches six months of age as possible. Mothers have long had a nickname for certain of the first set of teeth, speaking of the "eye" and "stomach" teeth. Perhaps it would not be amiss to nickname the very first teeth baby cuts, calling them the immunization teeth, because they are cut at just about the time the child should be immunized, first against diphtheria, and soon thereafter against smallpox. Such a scheme may not be scientific, but it helps to remind us of the proper time.

The next two or three months are the season of the year when we should turn our thoughts especially to diphtheria immunization. When

we have reached the ideal of immunizing every child at six months of age, we will not have to set any time for special effort, but we have not reached that state, so there are thousands of tots six years and younger who are not protected and who would probably take diphtheria if they were exposed. Therefore, we must think of having them protected now, when there will be sufficient time for complete protection to develop before the disease becomes prevalent again next fall.

Another important fact in regard to diphtheria in the South is that, although the Southern States had a much lower diphtheria mortality rate ten years ago than the Northern States, the states showing the highest rates in 1933 were all Southern states. This is probably not due entirely or even largely to more extensive immunization in the North, but, whatever the cause, it is a challenge to us to marshal our forces and see that our babies and children are protected and that the mortality rate in North Carolina is reduced to the lowest possible level. Diphtheria in North Carolina had fallen rather steadily for some time prior to 1933. In that year the mortality rate rose over that of 1932, and it is probable that completed figures for 1934 will show a rate as high or higher than that for 1933.

Just a word in regard to the immunizing agent we are using at the present time, namely, alum-precipitated toxoid. This is a product which in young children gives little or no reaction, and yet induces protection in a very high percentage of cases. The average percentage rendered immune has been 94 to 98 per cent. This product contains no serum and, therefore, does not sensitize the child in any way. The objection used to be raised to toxin-antitoxin that it caused the individual to have disagreeable and even dangerous reactions to subsequent administrations of antitoxins or serums, but this is not the case with alum-precipitated toxoid. Its use is simple and attended

with little inconvenience, is harmless, and is effective.

To summarize: Our weapons for fighting diphtheria are more complete than those against almost any other disease. The agent now used for diphtheria immunization is highly effective and requires but one injection. The most dangerous period of the child's life, so far as this disease is concerned, is from six months to four years of age; therefore he should be immunized as soon as he

reaches six months of age, or at the time of appearance of the very first teeth. This is the season of the year when the immunization of unprotected children over six months of age should be pushed in order that their protection may develop before the disease begins to increase next fall. These facts constitute a challenge to parents, physicians, and health officials to see that our children are protected against this dread disease NOW.

We Do Not Harvest Our Bumper Baby Crop

IT is to be regretted that the General Assembly thinks better of making more liberal the right of its citizens to breed legally than it does of protecting the State's babies after they are brought on this earth by the travail of many mothers who are innocent victims of the liberality of our statesmen. License fees for marriage have been reduced; the requirement for publication of marriage bans by minors has been abolished; the regulation requiring a physician's certificate showing a person to be free from contagious disease before a marriage license may be granted has been repealed. It has become easy to marry and breed children legally in North Carolina.

But it is hard to rear a child to maturity in this State. North Carolina ranks high among the states in its infant and maternity death rates. Thousands of babies born to North Carolina mothers die before they reach one year of age. They die as the result of ignorance and poverty, and that poverty is not only the lack of material things, but the poverty of knowledge of proper care and nourishment of the young. It is the sort of ignorance among our people that is shown in magnified form by legislators who make it easy for the ignorant and blind to breed babies legally, but refuse to pass a law which requires of those who assist mothers at their time of peril in

bringing these babies to life as much knowledge of cleanliness and sanitation as the State requires of the barbers at the State capital who shave the legislators' faces or of the sweet young "beauticians" who lave cosmetic mud upon the cheeks of the ladies-in-waiting in the hotel lobbies.

It may be, quoting the language of Representative Wayland Spruill of Bertie, who let loose some of his choice oratory and wit in killing a bill for the regulation of the practice of midwifery, that down here in the Roanoke-Chowan section we are prolific enough to produce "a twice-a-year crop of babies," while our fertile soil, known as the best and most adaptable within the confines of the Nation, will give up only one crop of corn or tobacco or cotton. But we cultivate these crops and bring them to profitable harvest. We do not do as well by our babies. They die by the hundreds because of ignorance and lack of sanitation on the part of the midwives who are the only attendants at the greater percentage of births. Two of our counties—Bertie, Representative Spruill's own, and Hertford—are rated among the highest in North Carolina in infant and maternity death rates.

In the place of oratory lauding our breeding capacity, there should be shame that such conditions exist and every effort given for their correction.—*Ledger-Advance, Windsor.*

**THIS SPACE IS
SORROWFULLY DEDICATED
TO THE MEMORY
OF THE
6,072**

**NORTH CAROLINA BABIES
WHO DIED DURING 1934 BEFORE
THEY WERE ONE YEAR OLD**

**A DISGRACEFUL SACRIFICE OF INFANT LIFE
FOR WHICH THE STATE HAS NO
LEGITIMATE ALIBI**

MR. JNO. G. BEARD,
CHAPEL HILL, N. C.



The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

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Vol. 50

JUNE, 1935

No. 6

Detective Work Against the Malaria Parasite



DOCTOR WHITE OF DUPLIN COUNTY MAKING BLOOD EXAMINATIONS TO LOCATE CENTERS OF MALARIA

This important work has been carried on by the State Board of Health through many eastern health officers in coöperation with malaria control activities being sponsored by the North Carolina Emergency Relief Administration under supervision of the North Carolina State Board of Health, assisted by the United States Public Health Service. The malaria menace and the mosquito nuisance have been removed and are still being removed from many North Carolina towns and rural centers of population. You can help your community obtain such service by reporting to the State Board of Health any prevalence of malaria.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
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Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
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Don't Spit Placards	Measles	Typhoid Placards
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters)	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Minimum Standards of Prenatal Care	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Breast Feeding	Instructions for North Carolina Midwives.
Infant Care. The Prevention of Infantile Diarrhea	
Table of Heights and Weights	

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THE Health Bulletin



PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. 50

JUNE, 1935

No. 6

Notes and Comment

By THE EDITOR

IN 1934 there were 2,114 cases of diphtheria reported to the North Carolina State Board of Health. In that year 208 deaths occurred.

These figures are presented here to call attention again to the fact that diphtheria is a preventable disease. With the new toxoid preparation more than 95 out of each 100 cases could be prevented. Most of these deaths occur in children under school age. A large percentage occurs under three years of age. When toxoid is given to a baby between six months and twelve months of age, it is immunized practically for life.

In the recent Legislature a bill was introduced in the Senate requiring all parents to have their babies immunized against diphtheria between six and twelve months old. The hearing before the Health Committee on this bill brought to Raleigh a large aggregation of quacks and the votaries of one or two so-called religious cults. They are the folks who claim that disease germs do not exist, and some of them even deny the existence of disease of any kind. All of them raised as loud noise as they could against the requirements of this bill.

It was clearly brought out at the hearing that the use of the toxoid could not possibly hurt any baby, and science has clearly demonstrated that it protects nearly all of them against diphtheria; and yet these antis, or objectors, succeeded in beclouding the issue to such an extent that, even though the bill was re-

ported favorably, it was killed on the floor of the Senate.

Just why any human being with normal faculties and average intelligence could object to a baby's being given a harmless preparation that would protect it from so terrible a disease as diphtheria is beyond our understanding. No one has greater respect for religious scruples and genuine religious principles than the writer of these lines, and no one has more contempt for people who try to befuddle the public under the guise of religion than we have.

These aforementioned cults would deny to a child ill of diphtheria the use of antitoxin. An adult in his normal faculty has a right to take or decline any treatment of any kind when he is sick or when he is well. If he knows the consequences of such neglect, he is within his rights and nobody could or should object. But when such an individual undertakes to prevent the administration of an established preventive to a helpless baby, then it is time to end such so-called personal liberty.

Personally, this writer did not approve the introduction of such a bill, preferring to go along with the educational work, which is a slow process, but sure in the end. But the objection of the writer to the legislation was one of methods, and not of principles. We have always believed in teaching by demonstration and example and in the slow process of education. We have not believed in force and compulsion in anything

when it could possibly be avoided. The net fact remains, however, that diphtheria is still with us; and many people in this State, as a result of misinformation disseminated, will continue to see their babies contract diphtheria and die.

For several years the summer round-ups, or pre-school clinics, held by the parent-teacher organizations and various health communities of the State have insisted on the immunization of all pre-school children against diphtheria. This will be kept up. We hope this year before schools start in September that every child entering school for the first time may present proof of immunization against diphtheria before enrolling in the schools.

Diphtheria is not one of the diseases in which an attack confers immunity. A child may have repeated attacks, as many maybe as three or four, perhaps at an interval of a year or more. The last attack may kill it. Therefore, when an almost sure preventive is worked out by research workers and presented to the public, such preventive should be utilized one hundred per cent.

* * *

RECENTLY there has been formed in New York City, with headquarters at No. 80 Broadway, a corporation known as the "Fish and Sea Food Institute of the United States." Its purpose is to promote a better understanding of the advantages of fish and sea food, emphasizing its economic food value. It is prepared to supply health officers and physicians, hospitals and others "a source of authentic information on the advantages of fish and sea food, from the nutritive, the dietetic, the economic, and the gustatory point of view."

As its promoters frankly state, it is founded by the leaders in the fish industries. It has the full support and coöperation of the United States Bureau of Fisheries. They will have available information, through bulletins on fish and sea food, covering

dietetics, home economics, menus and recipes, and so on. These people are endeavoring to awaken the American people to a better understanding of the advantages of fish and sea food from the health as well as other points of view. This organization should receive the coöperation of the public agencies in North Carolina.

We have pointed out in these columns several times the desirability from a health standpoint of a greater use of fish and sea food in the diet of the average North Carolina family. The fishing and sea-food industries on the coast of eastern North Carolina is one of the large interests of the State. Their greatest handicap has been lack of a market. They have the potential market here in the State of North Carolina if the people could be induced to avail themselves of this plentiful, nutritious food. It has been cheaper the past year than ever before, and it seems more plentiful. The fishing and sea-food industries in this State occupy a position similar to that of the dairying industries. The more use our home folks make of our dairy products and our sea foods, the more work and the greater prosperity is certain to come to large numbers of the State's citizens, and at the same time they are consuming food which is nourishing and helpful.

* * *

THREE things have recently occurred to remind us of a determination we have had for sometime to say something here about the desirability of physicians and nurses and others engaged in treating or caring for the sick exhibiting a little more sympathy and kindly feeling in their contacts with sick folks and with their relatives.

The first item was a front-page paragraph at the top of the page in *The Health Bulletin* of the New Hampshire State Board of Health for January. The paragraph was the following quotation, from none other than North Carolina's own distinguished citizen, Dr. Hubert A. Roys-

ter, of Raleigh. Here is the paragraph:

"Nothing so promotes the hospital idea among both the rich and the poor in a community, nothing so educates the ignorant to the need, and the well-informed to the value of a hospital, as frank expressions of good-will and simple human kindness within its walls by everyone associated with the conduct of the institution."

In the foregoing paragraph Doctor Royster has said all that could be said on the subject. He has had more than forty years of experience as a surgeon with a large practice, in dealing with various types of humanity. He has clearly stated one of the greatest needs in this field that we know of. He speaks with authority; and this writer, for one, is grateful to Doctor Royster for his expression, even though we had to go to New Hampshire to get this statement. We are proud of the recognition so accorded to Doctor Royster in a far-away State.

The second item: During the recent session of the Legislature a man from Cumberland County who had recently been a patient in one of the State hospitals wrote a letter complaining of the lack of this very thing. He made no charges of incompetence or of deliberate mistreatment; but he did charge that the kindly individual encouraging contact with patients was neglected. In this one important essential the head of the institution readily admitted the truth of the man's complaint. An overworked doctor, who can have time for only a glance at most of the individual patients among the hundreds he has under his charge each day, cannot take time to stop and give the one most important part of his service as a physician to the patient who is upset and in sore need of direct sympathy, particularly from the physician. There should be a sufficient number of physicians and nurses on the staff of all these institutions, and of every hospital treating the sick, no matter what their

ailment, to give ample time for direct personal relations between physician and patient and between nurse and patient.

The third item: Out of the large number of letters received by the State Board of Health daily there is always one or more that illustrate in one way or another the type we are discussing. We quote from one such letter. This was from a man who stated that he had had pellagra for several years. Last year he spent two weeks in a hospital, and they advised him that medicine would do him little good, and sent him back home with the injunction that he should eat plenty of eggs, red meats, whole-wheat breads, vegetables, and fruits, and drink plenty of milk. And they told him also to take some brewer's yeast every day, especially through the spring months.

This man writes that in the latter days of March his symptoms have come back and he is worse off than ever before. He says that he has not been able to work to make anything in a long time; that he has no funds, and therefore he had found it necessary to visit the county health officer and ask that official to advise him and to prescribe for him. He stated that he had been to see the health officer several times. He, of course, had told him that he must eat the food the hospital had prescribed the previous year, and that he should take some yeast. He stated the health officer told him medicine would do him no good, and he would prescribe none for him.

The following statement, however, arrested our attention above everything else in his letter: "But Doctor Blank doesn't ever ask me how I am—whether I am getting any better or whether I am any worse."

In this case we happen to know that this county health officer is a capable physician and an efficient health officer. The county is a large one, and the health officer is doing a great deal of work. Many people come to the health department for advice about various matters. Like

the practicing physician, he is weary, daily listening attentively to the ills of the people who consult him. He is probably doing the best he can in the situation; but the plain fact remains that the impression on this one patient is not a favorable one.

Pellagra is always accompanied by a mental upset, and the mental condition of the patient, his attitude, and his fears, and his hopes—all should be taken into consideration, and he should be given all the help and encouragement possible. We are not criticising any health officer or any physician who fails to do these

things, but we are passing along to them and the public the fact that such things are essentially necessary for the best results for all concerned.

It should be emphasized right here that no health officer or health department should be required to examine and prescribe for patients of any kind. That is a function which belongs solely to the practicing physicians, and local authorities should not expect or allow their health officers to undertake such work. The health officer should be expected to devote his entire time to preventive medicine in its broadest meaning.

Heredit, Germs, Teeth

Factors Bringing About Tooth Decay Are Analyzed

By WALDERMAR KAEMPFERT in New York Times

RISING before the Michigan Academy of Science, Arts and Letters, Dr. Russell W. Bunting of the University of Michigan's Dental School told why he thought that teeth decay. The question is one that agitates physicians and dentists alike. Bunting puts his finger on the bacillus acidophilus and gives reasons for believing that it plays some part in the decay of teeth. Some part, mind you. For the Doctor believes that half a dozen factors are at play.

For five years Doctor Bunting has been experimenting in an orphanage of 300 children whose diet he could control. He found that when the food was low in sugar, tooth decay disappeared, except in a few over-susceptible cases.

This smacks of the old-fashioned notion that candies and sweets are bad for the teeth—a notion which some dental authorities have pooh-poohed in late years. Doctor Bunting supports it with some convincing evidence. Whenever there is a high count of bacillus acidophilus in the mouth, he finds also a high rate of decay. Heap more sugar in your des-

sert, pour maple syrup on your buckwheat cakes, gulp down half a dozen cloying ice-cream sodas or sundaes a day, and the bacillus flourishes. The old preaching against sweets is justified, because the bacillus likes sweets, too.

Heredit Important

But Doctor Bunting is just as insistent that heredity is an important factor in tooth decay. About 7 per cent of the hundreds of cases that he studied were naturally immune to caries. Their parents and grandparents had unwittingly seen to that by handing on their own good teeth. At the other extreme were 10 per cent whose teeth could be prevented from rotting only by unceasing vigilance. Between the highly immune and the highly susceptible lie 83 per cent who should control their diet.

Whether or not Doctor Bunting's deduction is correct, it is certain that many dentists are now convinced of the efficacy of dieting. Eskimos who never eat the white man's pap, the inhabitants of Tristan da Cunha and other lonely isles cut off from sugary and starchy food have no need of a dentist.

Need of Infant Care In North Carolina

By R. T. STIMPSON, M.D., *Assistant Director of the Bureau of Vital Statistics,
State Board of Health*

EVERY baby born within the State today is rightly entitled to have his citizenship recorded. A baby's birth certificate has been aptly called its citizenship papers. That no child born within the last year might have reason to regret in future years that no record was made of his arrival, the State Board of Health, with the assistance of the United States Census Bureau and the Emergency Relief Administration, recently conducted a "Register Your Baby" campaign to secure the record of every baby less than one year of age, and at the same time determine how completely these births had been recorded.

Many parents throughout North Carolina, realizing the importance to their child of having its name on the State's record, have taken the time and energy necessary to make this inquiry of the State Board of Health. We are happy to be able to state that the great majority of these children's births had been recorded, and we are endeavoring to secure a record of all those not on file by sending a blank to the parents and asking that they have the attending physician make the necessary entries. When this is done, the record will be safely kept along with those already on file.

If there are parents with a baby that has not reached its first birthday, and if they have not previously returned a card, they may still do so. Cards for this purpose may be obtained at the postoffice, county relief office, or from the State Board of Health.

It is hoped that in the future it will not be necessary to conduct a special campaign to obtain complete reporting of births. In the normal course of events the baby's birth should be recorded within a few days of birth. If this mandate is complied

with, there will be no cause for special campaigns.

Interest in the child and child welfare has been evident at all ages throughout history, and though we can with reason claim that only in modern times, in fact during the past fifty years, has the child really come into his own rightful place and been recognized and treated as the future hope of every nation, we cannot claim that many of the methods for his welfare are of modern conception. We are inclined to think of the children of ancient times as the recipients of little or no consideration and, in fact, of many wanton cruelties. In early Spartan history the child was considered worth saving only if he showed signs of being strong, but if he was weak and feeble, he was exposed to death. In the early days the father had complete power over the life and death of his children, and the expression "to raise a child" was first used to signify the father's intention to bring up his child by raising him in his arms and invoking the blessings of the Goddess Levana.

Many of the methods of child welfare began developing quite a good many years ago, but it has been only within recent times that these methods have been practiced to any extent, and these, with the use of the newer knowledge acquired in medicine, has made infant life much more secure. But if we could put into practice all that is known about keeping the infant healthy, the number of infant deaths in North Carolina would be greatly reduced.

Last year there were approximately 80,000 births in North Carolina. How many of these 80,000 will never survive the childhood infections and afflictions and attain school age? Or what smaller number will never survive to their first birthday? What we

would more especially like to know is what can be done to give every one of these 80,000 the best possible chance to survive the first year, the second, third, etc., and enter school, and what school health program will insure the most abundant health.

Before we can know what will aid the infant in safely surviving the hazards of the first year, we must know what those hazards are. In 1934 there were over 6,000 deaths among children under one year of age. This meant that if the same ratio holds for this year, that 7 out of every 100 infants will die, many of them needlessly, within the year. Of every seven infant deaths, approximately two will not survive for 24 hours after birth. This will mean the loss of around 1,400 infants the first day following birth. The cause of death of the great majority of these will be given as premature birth.

Therefore, it is readily seen that if eight or nine hundred infant lives are to be saved, the health measures must be practiced by the mother before the arrival of the infant. In some cases prematurity is unavoidable, but in many, with proper medical advice, and the following of this advice, it is avoidable. We cannot hope to reduce materially this high infant death rate until the mother seeks and follows the advice of her physician. This is not a matter to be remedied by an eleventh-hour appeal, but a matter for medical supervision for months before the infant's expected arrival.

In addition to the lessening in the infant death rate, the same course will save many mothers from an untimely death, of which there were 547 in 1934. This gives us a rate considerably higher than for the country as a whole. There is little satisfaction in saying our greater number of maternal deaths is due to the larger number of Negroes in our population. It is true that the maternal death rate for the Negro is higher than for the white, but our white rate is not at all creditable.

The second greatest cause of infant deaths is given as congenital debility, or an inherited lack of strength to survive the conditions met on its arrival into the outside world. Almost one thousand infant deaths will be attributed to this condition. A stronger body can be given by a healthier condition of the parents, and more especially the mother. To attain this, the same advice is applicable as was given for the prevention of premature birth and maternal death.

Less than 5 per cent of the deaths under one are due to some deformity of the baby. This may or may not be reducible.

Thus, these conditions, the remedy of which lies largely in the care of the mother before the birth of the baby, account for almost half of the deaths occurring the first year of life. Forty per cent or approximately 2,400 babies will die within two weeks of birth. Whatever is done to decrease this number must be done before birth and quickly after, for the time is short. Well-meaning neighborly advice and home medication will not take the place of professional care.

With 40 per cent of the babies to die under one already lost, what condition will demand the greatest number of the survivors? The answer to that is diarrhea and enteritis or "summer diarrhea," as it is often called, with pneumonia vying for second place—both conditions to a large extent preventable.

The greatest preventive of summer diarrhea is proper diet. The ideal nourishment for the young infant is, of course, breast milk, except in the exceptional case. When other food is begun, cow's milk is the normal selection. But to lower the possibility of diarrhea, the milk must be the best. Extra precaution must be taken during the hot summer months. The relation of diarrhea in children to the milk supply has been a sanitary problem for many years. Studies have definitely traced relationships between the condition of milk, dis-

ease among children, and infant deaths. Children below twelve months are generally especially sensitive to the changes produced in milk, and when milk sours, naturally, containing a large number of germs, diarrhea is likely to occur. Striking contrasts have been noted in comparison of infants fed on cheap, heavily infected milk, with those fed on good pasteurized and other clean milk. It is thus of the utmost importance in the prevention of infantile diarrhea to safeguard milk from contamination. Use only

the best and safest and exercise every precaution to prevent contamination.

Pneumonia among infants and children is largely secondary to some acute infections, as whooping cough, etc. In so far as these conditions are preventable, pneumonia is preventable.

To secure for every child the most favorable conditions for its survival, it is necessary that parents, physicians, sanitariums, and laymen alike work toward this end. When this is done, life for the infant in North Carolina will be much more certain.

Some Items From State Nurses' Reports

AS director of the work of the nurses employed on the staff of the State Board of Health, the editor of THE HEALTH BULLETIN receives a great many interesting reports from the veteran nurses, who spend all their time at work in counties having no organized health departments. The files of the division are full of interesting sidelights on many public health problems submitted by these nurses in their letters and narrative reports. We are quoting a few of these comments, which we are sure will be of interest to people everywhere.

One of the nurses, working in the eastern section of the State, reported that she had worked in one consolidated school on the coast of eastern North Carolina. The population of the place is more than a thousand, and she said that reports were current that there were only two milk cows in the community. The chief point in this item follows: She said that in the examination of more than a score of pre-school children on the day of her visit she never had seen such deplorable conditions in children's teeth.

Another nurse, working in one of the central counties, reports again on a very old story. Fortunately, this

condition is met with much less frequently today than it has been in the past. This nurse states that the principal of one of the largest schools in the section she was at work in was a woman who had been in earlier years the teacher of the seventh grade. She said this principal had maintained fine order in the school, but did not seem much interested in the nurse's work for the children, such as testing vision and so on. She finally consented, somewhat reluctantly, for what she probably regarded as a disturbance in the routine work. There are a few teachers left who still think that good order and the subject matter of the curriculum are the chief objectives of the school system. In the routine inspection that the nurse carried through, which this teacher, of course, observed, the nurse found that one of the best pupils in the school, a fourteen-year-old girl, was emaciated, underweight, and had a serious visual defect. This pupil was not the only one found in serious need of corrective measures. When such defects are remedied in time it is invaluable, but when such defects are neglected it often means disaster for the child.

Both of these stories are old ones, and we hope sometime they will be interesting simply as historical relics.

Another nurse, working in a mountain county, reported that the physical condition of a thirteen-year-old girl, together with the family history, caused her to fear the child had tuberculosis. The mother came out to see the nurse, and the latter went home with the mother to discuss the matter with the father. The nurse insisted that they take the child to the family physician for a medical examination and advice. It developed as usual in such cases that they had no family doctor and were not in the habit of consulting a physician. The father was indifferent and appeared little interested. The nurse's comment is the point in this story: "I left them thinking the fa-

ther needed attention as much as the child, but of a different character."

But there is a much brighter side to all these nurses' reports now when compared to those of a few years ago. Everywhere there is more attention to the children's health needs. More people are public-health conscious and more of them have a sympathetic attitude toward the efforts of health workers, and it is rare now to find a teacher who fails to give the State Board of Health nurse a warm welcome when she visits the school. The teachers now, white and colored, do everything in their power to see that the children have the advantages of these inspections and profit by them.

An Indecency

HOWEVER chivalrous the purpose of the North Carolina Senate in its passage of an amendment to the marriage laws repealing the requirement of an affidavit of physical soundness on the part of the masculine member of the matrimonial partnership before the contract may be entered into, those voting for it have lent themselves to a mighty sorry business.

A few years since this State had a marriage law that, while not perfect, was a testimonial to the intelligent respect which the more thoughtful of our men and women feel for their kind. Publication of the banns, health certificates for both bride and groom, protected them and the race. Of course a few nice youngsters in a hurry eloped to other states, as did some who could not have been certificated at home. Marrying magistrates of Virginia, South Carolina, and perhaps an occasional Tennessee or Georgia 'squire, picked up a few dollars which border counties would have liked to retain within their bounds; but what of it?

We were making an honest effort to give to marriage that self-respect

to which it as an institution is entitled. We were attempting to avert some of the tragedies resulting from the propagation of the species by its sorriest specimens.

But the past two-three Legislatures have jested or worse at the ideals embodied in the best-contrived marriage law of this section of the United States. It was thought indelicate to require a mother of men to be examined by her family physician as to her fitness for motherhood. It was deemed perverse of public interest to require a notice to the public from those who desired to enter into the contract which most concerns the public.

And now it would seem all bridegrooms, of whatever age or physical condition, must be considered Bayards, *sans peur, sans reproche*, and fit for mating at the drop of a hat.—*Greensboro News*.

The amount of publicity the doctor who looks after the Dionne quintuplets gets is enough to make you think he is the mother of the babies.—*Reidsville Review*.

Report of Health Officer for City of Concord and Cabarrus County

Covering Activities of Cabarrus County Health Department From January to December, 1934, Inclusive

By D. G. CALDWELL, M.D., Health Officer, Concord, N. C.

THE activities of Cabarrus County Health Department for 1934 have been very comprehensive. The volume of work done has far exceeded that of any previous twelve months in the history of the Health Department.

The communicable disease situation in Cabarrus County during 1934 was more eventful than for many years. A very severe epidemic of measles during the first few months of the year required a large amount of the nurses' time. Cases of measles to the number of 2,673 were quarantined by personal visit; 386 cases of other diseases were visited for quarantine purposes, making a total of 3,059 quarantine visits during the year. While only four deaths were reported due to measles, it is certain that many of the deaths from pneumonia during that period were indirectly due to measles.

Scarlet fever was much less prevalent in 1934, showing 27 cases for the year, as against 40 cases in 1933. There were no deaths from scarlet fever during the year.

No smallpox was reported in 1934.

Diphtheria again reached the low level attained in 1932, with only 21 cases reported. However, five of these cases were fatal.

Typhoid fever showed an increase, with ten cases reported. Only three cases were reported in 1933. Two deaths resulted from typhoid fever in 1934.

Other features of the communicable disease program were 505 special examinations made for the purpose of determining the presence of disease-producing organisms. In this group is included the collecting of

specimens for analysis, skin tests for tuberculosis, etc.

The county-wide immunization program against typhoid fever, diphtheria, and smallpox was very successful during 1934. Babies and young children to the number of 762 were vaccinated against diphtheria. The total number of persons receiving complete anti-typhoid treatment was 6,254, or about one-eighth of the entire population of the county. Since this represents three injections for each person, the total number of inoculations amounted to 18,762. The smallpox vaccination requirements, carried out in coöperation with the school authorities, resulted in the vaccination of 1,041 school children.

This immunization work is one of the most important functions of the Health Department. It is difficult to estimate the number of diseases that have been prevented, with their consequent economic loss and damage to human life. It is estimated that the saving of one useful life and ten weeks of average sickness will balance the cost of a large amount of public health work. Enormous gains to individual families and to the county as a whole result when we prevent disease and postpone death.

The Venereal Disease Clinic, conducted by the Health Officer, was very active during the year. White patients were given 346 treatments and colored patients visited the clinic 387 times for treatment, making a total of 733 treatments for venereal disease. Each case requires a large number of treatments, and these are mostly intravenous injections of Salvarsan.

The anti-tuberculosis program, under the supervision of Miss Naomi Moore, included two adult clinics in which 130 persons were examined. The Preventorium was carried on again for ten weeks during the summer, with thirty children under treatment. The Health Officer coöperates by examining these children and giving medical aid while the children are under treatment at the Preventorium. The tuberculosis nurse made 550 visits in the interest of tuberculosis cases.

As a part of the program for infant and maternal welfare, a series of classes was held for the instruction of midwives. During the year 243 visits were made by the nurses to maternity cases, for advice and supervision. The number of babies visited was 281.

Pre-school clinics held by the Health Officer and nurses during the spring were attended by 522 children.

A large volume of work has been done in the interest of school children. A total of 6,107 children were examined during the year. Many of these children were handicapped by physical defects. As time permitted, nurses have visited the homes of these children, urging and encouraging the parents to have these defects remedied. Visits have been made to 1,153 homes.

These school examinations have been the means through which most of the cases for the large yearly tonsil clinics have been found. The clinic last June was very successful. Two hundred and twenty-nine children were operated upon. This feature of our work has the interest and support of the public to a large degree. It is very valuable in an educational way as well as to the children who profit directly by this service.

Another agency through which many defects were corrected was the dental clinic made possible through the generosity of the County Commissioners. It has been a pleasure to see the good dental work done in this clinic for hundreds of children.

In the interest of health education, almost 10,000 health pamphlets have been distributed during the year through schools and other agencies; 81 articles on health have been published in the local paper, and we wish to acknowledge with appreciation the fine coöperation given by the staff of *The Tribune*. Twenty-one talks on health were made by members of the department to P.-T. A. and other groups.

The total number of specimens sent to the State Laboratory for analysis in 1934 was 605.

The sanitation program in the county was enlarged a great deal during the year. The early months saw much sanitary work done through the CWA. While this was not entirely satisfactory as to economy or efficiency, a considerable amount of good work was done. In November, through the United States Public Health Service, a sanitary inspector directly responsible to the Health Officer was appointed. Mr. Charles V. Morgan is filling this position, and it is expected that this work will go forward with good results.

In relation to the matter of sanitation, I, as Health Officer, would like to urge that the County Board of Health adopt a county-wide pigpen law, to cover congested areas which do not come under the jurisdiction of the ordinances of the City of Concord.

The milk sanitation program in this county has gone steadily forward in 1934. In my opinion, it has made much improvement since last year. A recent letter from Mr. Booker, of the State Board of Health, states that there has been quite an improvement over the preceding year, and he feels that with a little more time and effort all the ratings can be brought to over 90 per cent, especially when some of the new machinery contemplated is installed. However, Mr. John L. Brown, Jr., milk inspector, will make a detailed report of this work.

The Health Officer coöperates in this work by examining all public

food handlers. During 1934, 277 food handlers were examined by the Health Officer and certificated as being free from syphilis, tuberculosis, or typhoid germs.

The jail and County Home have made frequent calls for medical attention. The Health Officer made 83 visits to the jail, treating 177 persons. The County Home was visited 81 times, 127 persons having been treated.

In closing, Cabarrus County Health Department wishes to express appreciation of the fine coöperation of the

County Board of Health, the school authorities, the medical profession, and all other organizations or individuals who have contributed to the public health accomplishments in this county during 1934.

[EDITOR'S NOTE: We are publishing the annual report of Dr. Caldwell in full, because it illustrates plainly some of the duties carried on by a modern, full unit combined county and city health department. We feel that many of our readers will find this information interesting.]

More and More Babies

THE fact that North Carolina has a tremendously high birth rate and the fact that it increased again in March is not a fact over which to be either proud or sorrowful; it is rather beside the point. The crux of the situation is: What kind of babies are North Carolinians bringing into the world? And the answer is not a beautiful one.

The old saying, "The rich get richer and the poor get children," is lamentably too true. This paper takes no stand on the subject of birth control, but at the same time it recognizes the fact that partial dissemination of birth-control informa-

tion has resulted in fewer and fewer births among the higher intellectual types and no change in the rate among those further down in the intellectual scale. The result, of course, is a rapidly increasing preponderance of citizens of the criminal, moron, and mentally incompetent classes.

The problem of genetics is one which has been studiously avoided, not only in North Carolina, but in the country as a whole. The time must come when the problem will have to be given attention, and the sooner that time comes, the quicker the situation may be remedied.—*Tarboro Southerner.*

"But I Only Had One Drink"

AN analysis of 119 automobile accidents, involving the death of 216 persons, made in Milwaukee by Herman A. Heise, M.D., and published in the *Journal of the American Medical Association*, shows that it is not primarily the obvious "drunk" who constitutes a major road menace, but the "drinking driver"—the man who thinks he can drive as well after a little nip.

Doctor Heise found that the alcohol accidents, mostly after little nips, were responsible for injury or death to more than two people per accident, while the non-alcohol accidents

involved only slightly more than one person per accident. There is a direct relationship between the severity of the accident and the amount of alcohol; from which the only-one-little-nipper may draw the conclusion that he is relatively unlikely to kill anyone, but may merely maim someone for life. This knowledge should be a relief.

"Considering a person sober as long as he can still walk and talk is responsible for the small value of present-day statistics regarding the relationship of alcohol to automobile accidents," Doctor Heise states.—*Readers' Digest.*

How a Little Boy Learned To Be Clean

By NELL POOL, *Women's College, University of North Carolina*

There was a little lad, my dears.

Who went to bed one night,
His toothbrush hanging high and dry,
His face, oh my! a sight.

His hands were anything but clean,
But he said, "I don't care;
I'm awfully sleepy," and you see,
His mother wasn't there.

So into bed he tumbled,
And before he could repent
He drifted into dreamland,
And what a night he spent!

A giant toothbrush came
And set himself upon the bed;
And then a little band of soaps
Came dancing around his head.

With rough and woolly towels then
They tied his limbs quite tight;
His eyes and mouth they filled with suds;
His heart they filled with fright.

Old Mr. Toothbrush next approached,
And in his hand he had
A giant pail of water
He intended for the lad.

"Oh, Mr. Toothbrush," loud he cried,
And sat up straight in bed.
He opened wide his eyes to find
His mother there instead.

So you can bet from this day forth
This little boy was seen,
Before he tumbled into bed,
To make himself quite clean.

The Baby State

THERE may be some in North Carolina who will stir with pride at the news that North Carolina's long-boasted high birth rate rose again in March. This news that North Carolinians are having more babies may be a sign of recovery, depending upon whether babies are regarded as luxuries or necessities. The news may also throw some light on the General Assembly's difficulties and the problems of safety and security and education in the State.

Statistics, which may show much or little, demonstrate pretty clearly that North Carolina is the baby State in the Union. One-half of the population of North Carolina is 19 years old or younger, while in the Nation as a whole the proportion of such young people is only a little more than a third. Only South Carolina has a younger population. On the other hand, North Carolina and South Carolina have the smallest percentages of people in every age group from 20 years old on up, except in one instance.

The significance of this infantilism is obvious:

We have a larger proportion of

children of school age than any other State, except possibly our southern neighbor. With more white people in our population, we lead the Nation, ahead even of South Carolina, with the highest percentage of total population enrolled in schools.

We have more children to support and educate and fewer adults to support and educate them.

We have more young people to drive automobiles on our excellent highways than any other state, which may be worth considering in connection with our high highway death rate.

Thus, while it is possible that this high proportion of babies may soften the difficulties of North Carolina in considering old-age pension plans, it intensifies the State's difficulties in almost everything else.

We have talked plenty in recent years about the fact that our troubles came from piling up debt. We were not only piling up debts, but babies as well, and from a State standpoint one is about as expensive as the other. Now, as the March figures show, we may be still timid

about new debts, but we are not at all timid about new babies.

Unlike Papa Dionne, North Carolina has received little publicity outside the State for its baby crop, but the State ought to have very much the same feelings today in consider-

ing its bouncing and increasing babies as Mr. Dionne must have had in that early morning when Doctor Dafoe told him there were five of them. Name of a name! Mouths and minds to be filled. And how to fill them?—*News and Observer*.

Two Additional Assistants For the Stork

ACCORDING to a study made at Antioch College, unborn babies of smoking mothers are sensitive to the toxic properties of tobacco smoke, the heart action of the unborn infant usually speeding up when the prospective mother has taken a few whiffs of her favorite cigarette.

No conclusion was reached as to whether or not smoking by prospective mothers is harmful to the unborn infant. But further studies will be made after the babies of smoking mothers are born, in an effort to determine this.

Leaving learned doctors of medicine to settle that question, it may not be inappropriate to speculate on the extent of addiction to the smok-

ing habit, if any, of newly born infants of mothers who follow the practice of getting a lift by lighting a fag.

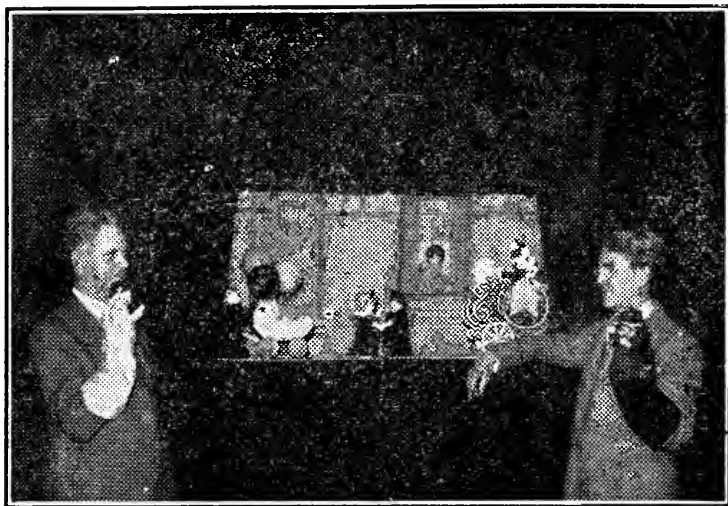
With drinking and smoking widely prevalent among prospective mothers, it may be that presently Dr. Stork will require two additional assistants when he delivers a new citizen—one to stand ready with cigarette and match and the other with a mixed cocktail.

Accustomed to the stimulation of alcohol and tobacco during the gestation period, the first wail of a newly born infant may be for a cigarette and the second for a cocktail. Failing to get the cigarette and drink, the little thing may cry all night.—*Upton G. Wilson in Reidsville Review*.

HOW LONG SHALL WE EAT TOGETHER?



TOOTH DRAMA MAKES ITS BOW TO NORTH CAROLINA AUDIENCES



Above is the stage of the puppet play, which this spring made its initial appearance in the State, with its sponsors, Dr. Ernest A. Branch, of the State Board of Health, and Professor Frederick H. Koch, of the Carolina Playmakers. The play is designed to appeal to children in the lower grammar grades. Every feature of the health teaching has been carefully worked out. Jack, the hero, a typical small boy, proved immensely popular. His curtain talks put over the four health rules, around which the play is built, with the skill of a veteran trouper, and had the happy faculty of drawing out his audiences until they ceased to be merely spectators and were themselves participating in the play. The show was sponsored by the State Board of Health, the Carolina Playmakers, and the Good Teeth Council for Children, Incorporated.

MR. JNO. G. BEARD,
CHAPEL HILL, N. C.



The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

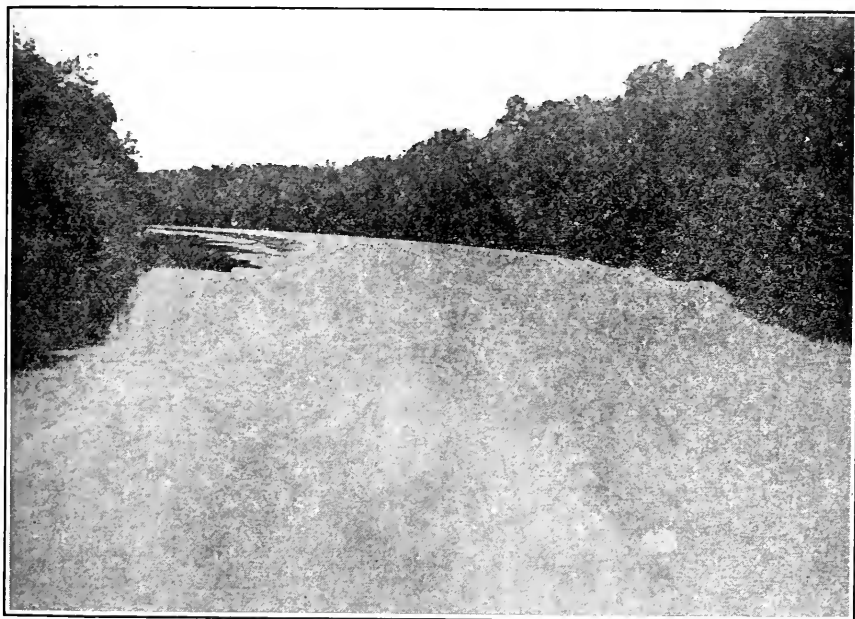
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No. 7

HISTORIC CAPE FEAR RIVER



PICTURE MADE AT HEAD OF NAVIGATION NEAR FAYETTEVILLE

We are publishing this picture of the Cape Fear, symbol of beauty and power, as a reminder to our people that our State has a heritage from Nature second to none of the others. But unless we bestir ourselves and conserve our natural advantages, by beautifying our roadsides, our towns and our farms, and conserving our forests, we will soon come to the day when travelers will look on our system of highways as cement trails to enable them to cross the State quickly. Our rivers will be thought of only as sewage channels.

Vacation time affords the opportunity for us to realize that health and beauty are desirable attributes of life itself.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
Diphtheria	Malaria	Typhoid Fever
Don't Spit Placards	Measles	Typhoid Placards
Eyes	Pellagra	Venereal Diseases
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Fly Placards	Disposal Plants	Whooping Cough
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine	5 to 6 months; 7, 8, and 9 months; 10,
monthly letters)	11, and 12 months; 1 year to 19 months;
Minimum Standards of Prenatal Care	19 months to 2 years.
Breast Feeding	Diet List: 9 to 12 months; 12 to 15
Infant Care. The Prevention of	months; 15 to 24 months; 2 to 3
Infantile Diarrhea	years; 3 to 6 years.
Table of Heights and Weights	Instructions for North Carolina Midwives.

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THE Health Bulletin



PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. 50

JULY, 1935

No. 7

Notes and Comment

By THE EDITOR

JULY and August being the months in which most of the workers of this State take their vacations, if any, we call attention at this time to the necessity for the observance of a few simple precautions if one would have a successful and satisfactory and happy vacation. We do not want to be a kill-joy, but as diseases, such as typhoid, have not been completely eradicated, and sources of infection still lurk here and there, it is best for people to be reminded that there are still some dangers incident to taking a vacation, besides automobile accidents. In this issue Dr. J. C. Knox has a short article under the general title of "Summer Vacation." We would suggest that anyone contemplating a vacation this summer would do well to read that article and be governed accordingly.

* * *

BACK in April and May newspaper readers the country over were interested in a report of some serious cases of food poisoning which occurred in Westchester County, New York. Several hundred people were made seriously sick from eating a certain kind of bakery product which contained fillers made from eggs and milk and sugar and so on. The infection in this case was traced down to some cold-storage eggs, imported from somewhere in the West. It seems that some of the eggs were cracked, and back in the line somewhere from producer to consumer somebody had an infection and in

handling the eggs got certain kinds of germs in the egg proper through the cracked shells.

As most people know, raw eggs and milk are two good culture media for many kinds of germs. That is, once the germs enter the egg, they multiply with extreme rapidity. Therefore when the custard was made from these eggs and not cooked thoroughly, the germs were not destroyed, but continued to multiply, and, therefore, the people eating the product were simply taking big doses of the poison.

* * *

PEOPLE often read of epidemics of septic sore throat. This condition has been described in the columns of THE HEALTH BULLETIN from time to time during the last few years. It is a condition which sometimes is almost as serious as diphtheria. It frequently has complications which involve the kidney and from which death often occurs. It is a serious germ disease.

During the last two weeks of April and the first week of May at Windsor in Bertie County there occurred an outbreak of septic sore throat. Sixteen people had the disease. The cases all seemed to originate from a certain drug store in the town that handled milk from one particular cow. The owner of the drug store developed septic sore throat, and the complication of pneumonia in the time of it resulted in his death. That was the only death occurring during the epidemic. The infection was

traced from the drug store to the cow from which milk was supplied, and the cow's udder was found to be infected. As soon as the supply of milk from this cow was stopped, no other case developed in the two weeks following, and, so far as we know, none has developed since.

It will thus be seen how easy it is for a little infection that starts from one tiny ulceration on the udder of one cow to travel to many people in a short time. People who are not absolutely sure of the purity of their milk supply and its safety should boil the milk before using, when they cannot obtain pasteurized milk from the dairy which supplies them. Raw milk is healthy and palatable, and in the vast majority of cases in this State is as safe as anything can be, but there always will be some danger from milk carelessly handled or handled by too many people. In the hot months of the year there is more danger from the transmission of such infections than there is in the colder winter months.

* * *

AS these lines are being written, about the last of May, there has been considerable disturbance raised on account of an outbreak of infantile paralysis. The cases reported are considerably more numerous than ordinarily for the time of year. Such cases as have already developed have seemed to occur sporadically, few, if any, of the children having been in intimate contact with any of the other children developing the disease. More cases have been reported in Wake County and Pitt County than anywhere else. On another page of this issue we are presenting a short article giving information about the disease. This article was prepared by Doctor Knox, the epidemiologist of the State Board of Health. It is simply a presentation of a few facts known about the disease.

A large percentage of children suffering, especially from mild attacks of this disease, recover, but in many cases the disease leaves complicating

after-effects which may last throughout life. It is, therefore, a serious disease, and people cannot be blamed for being fearful when it becomes too prevalent. There is no known method at present of preventing its development. Unlike such diseases as diphtheria and typhoid fever, there has as yet been developed no commonly used serum or vaccine which can be administered to children in order to prevent attacks of the disease. Isolation of the patient is recommended by physicians and health authorities merely as a precautionary matter.

While we are on this subject we would like to say that the reportable diseases—and infantile paralysis is one, just as diphtheria, scarlet fever, and so on—should be reported immediately on suspicion, to the health authorities. The law requires the attending physician to report the presence of such diseases within twenty-four hours to the county health officer, and it requires the county health officer to make such reports within twenty-four hours to the State epidemiologist at Raleigh. Unless the State epidemiologist has a prompt report from all of the practicing physicians and the county and city health officers of the State every day concerning such diseases, methods of prevention and information to the public cannot be provided, and such negligence results in increased fear and apprehension on the part of the public.

We would like to urge every physician and every county health officer, as well as every householder in the State, to make prompt reports upon the appearance of any reportable disease.

* * *

AS we have stated elsewhere, people cannot be blamed for being alarmed when such a disease as infantile paralysis occurs in a community. It is probable that the morbid fear exhibited in many quarters when the disease occurs is due to its mystery and to the designation of "paralysis," which sometimes leaves

the patient a physical cripple for life. On the other hand, to those of us whose daily work requires us to take note of deaths occurring from all causes, we cannot help but be amazed at the indifference with which the majority of people look on other diseases that kill much more frequently, and in larger numbers, every year. Diphtheria, for example, caused the death of more children in North Carolina last year than all the cases of infantile paralysis since vital statistics records have been kept. Diphtheria is also a disease which leaves in its wake very frequently after-effects, such as heart disease, which is no less serious than the paralysis and deformity resulting from infantile paralysis. For illustration, in the month of April in North Carolina nine deaths from diphtheria were reported to the State Board of Health. During the same month 52 cases were reported. The irony of this situation rests in the fact that diphtheria kills many more children, causes much more illness than infantile paralysis; and yet people go about their affairs every day with absolute unconcern about the ravages of this preventable disease.

Again we may call attention to the fact that in North Carolina every month somewhere between 300 and 500 babies under one year of age die.

A conservative estimate would be that at least half of these deaths are preventable. These babies die from such conditions as diarrhea and enteritis and other strictly preventable conditions; for example, in the month of April 418 babies died before the end of their first year.

Prevention of all these things is comparatively simple and easy. If all babies between six months and twelve months of age were given toxoid, diphtheria would soon entirely disappear from the State, and all of these cases of sickness and these deaths would be prevented. If the mothers of young infants would learn the simple expedient of boiling all the drinking water given to the babies of tender age, and either boiling or pasteurizing the milk given to babies, and otherwise to learn to put into effect the scrupulous cleanliness required by a young infant, certainly half of this large number of deaths could be prevented every year. More than one great scientist has repeatedly stated that if all the available information at present existing in the world could be practically applied by the people everywhere, preventable disease would disappear from the earth and the span of human life could be greatly extended almost immediately. But people just do naturally like to be indifferent and careless.

Poliomyelitis

(Infantile Paralysis)

By J. C. KNOX, M.D., Epidemiologist

THE disease poliomyelitis is more commonly known as infantile paralysis. This is a poor name for the disease, for the reason that adults and older children may and do have it. It is true, however, that the majority of cases occur in individuals under ten years of age, most of them in children under five years of age. The citizens of North Carolina have been quite alarmed

during the past weeks about this disease and have been more or less terrified because of its presence in the State. There are many questions that physicians and health officers are asked, and it is quite natural that such questions should form in the minds of the people.

It might be well, then, for us to answer some of the questions that are being asked daily, so that this

information may reach a larger number of people than otherwise would know about this disease.

What is infantile paralysis? Infantile paralysis, more accurately known as poliomyelitis, is an acute infectious disease that, as most people know it, results in a paralysis of some of the muscles of the body. The paralysis, as most folks know it, remains stationary and the patient rarely recovers completely; and thus such patients require careful orthopedic supervision to restore the greatest amount of function to the paralyzed legs and arms.

What is the cause of the disease? The cause is an ultra-microscopic agent which passes through the finest of filters; therefore, it is known as a "filtrable virus." Some other diseases caused by these viruses are smallpox, chicken pox, measles, mumps, and also epidemic encephalitis or sleeping sickness. This class of agents differs from the bacterial infectious type of agent in that the latter can be seen with a microscope and grown on various culture media, for example, the diphtheria bacillus and the typhoid bacillus.

Is the disease contagious? Poliomyelitis is mildly contagious in the true sense of the word; however, it belongs to that class of diseases that we speak of as being "communicable," or capable of being transmitted from one person to another. Only about one individual in twenty-five who are exposed to a brother or sister ill with poliomyelitis develop the disease as a result.

How is it transmitted? The infectious material of poliomyelitis is found in the nose and throat of the individual who is ill of the disease, and it is presumed that this material is transferred from the sick individual to another susceptible person. The fact that cases develop in individuals or children who have not had any known exposure to an active case of the illness causes many questions to arise in the minds of the people. The fact that these cases do

become ill without any known exposure can be explained in no other manner at this time than that there are healthy carriers of the virus in the general population and that these carriers play a very important rôle in the spread of the disease.

What can I do to prevent my child from having this disease? This is probably the most common question asked. Certainly, in times when there is an undue prevalence of a disease one should keep the smaller children away from crowds and gatherings of every kind. They should not be allowed to visit other children who are sick, nor, for that matter, should adults visit sick persons unless it is definitely known that poliomyelitis is not the cause of their illness. It is quite possible that a parent in visiting cases of this disease could bring the virus home to his or her children, or that someone else by visiting sick individuals could thus become temporary carrier, thereby causing a susceptible child to develop the disease. The question is asked as to mingling in crowds in the open air. Here again the advice is to avoid all crowds, whether in the open air, in homes, picture shows, theatres, churches, or elsewhere.

Is it all right for my child to go in the swimming pool? It is our advice that children under fifteen years of age should not use public swimming pools at this particular time.

Is there anything like drops that I can get to put in my child's nose and throat to keep him from contracting this disease? This question is frequently asked. At this time we have no known antiseptic to put in the nose and throat that will prevent this disease. It is even possible that some of the stronger antiseptics might make infection easier by causing an irritation of the lining of the membranes in the nose.

Is it safe to take my child on a trip? This is a difficult question to answer. It may be perfectly safe, and, on the other hand, it may not be at all safe. Therefore, the only

advice that we can offer is that travel by bus or train (in which one is naturally thrown with crowds and in which there is therefore potential danger) should be avoided at this time.

Is it safe for my child to attend a summer camp? In answer to this question, it is our advice that summer camps, particularly for the younger children, be avoided just at this time. As we cannot be sure that there is no danger in attending summer camps, we would advise against such attendance, even for older groups.

What are the symptoms of this disease? Poliomyelitis begins often as any other mild infection around the nose and throat. It may begin with mild sore throat, fever or gastro-intestinal upset, nausea and vomiting, perhaps diarrhea. Headache is usually present and pain in the muscles of the neck. These symptoms may last for two or three days, after which paralysis may or may not develop. This resemblance of the early symptoms to so many other diseases makes it necessary that parents be unusually alert in all of these upsets so that poliomyelitis will not be overlooked. Any suspicious illnesses of this sort should be placed under the care of a physician. Even for one trained in medicine it is often difficult to make a diagnosis, and certainly the parent should not assume that responsibility.

How long after exposure until a person becomes ill? This time varies from about three to eighteen days; most commonly around ten to twelve days elapse from the time of exposure until symptoms appear.

Do all cases result in paralysis? There are a certain number of cases in most outbreaks that do not become paralyzed. There may be muscular weakness which may clear up, and in certain cases there may be no evidence of any paralytic signs, even of muscular weakness or loss of function. Due to this fact, all suspicious cases should be promptly iso-

lated, put to bed, and the family doctor called.

Isn't there a serum for the treatment of this disease? A convalescent blood serum has been given in many cases, but when it was administered in a series of controlled cases it was found to be without particular value in the treatment of poliomyelitis.

What about the vaccine? There are two vaccines being worked upon at the present time. They are still in the experimental stage. Their value at this time is not known, and probably will not be definitely known for a few years. This vaccine is very limited in supply at the present time, due to the fact that it is made from the spinal cords of monkeys. This fact, of course, would limit the available quantity. There is now no commercial house licensed to prepare this vaccine. Only the experimenters themselves are making it. It is not available to the general public and probably could not be obtained by private physicians, except for controlled studies of its efficacy.

Is there a test for susceptibility to the disease? There is at this time no practical test to determine who is immune or who is not immune to poliomyelitis.

Can a person have poliomyelitis a second time? There are no records of a person having had poliomyelitis more than one time; in other words, one attack confers a lifetime immunity to the disease.

It is hoped that these questions and answers will serve to allay some of the fears of parents who are very much interested in poliomyelitis at such a time as the present. We might add that for the population of the State as a whole we are having very few cases at the present time per 100,000 population. To consider the most susceptible age, those children under fifteen years—and there are approximately 850,000 children of this age in North Carolina—we still find that there are very few of the total population affected by poliomyelitis.

Some Practical Considerations of the Rabies Problem

By J. W. KELLOGG, Assistant Director, State Laboratory of Hygiene

THE subject of this paper is chosen, not because rabies is one of our greatest public health problems, but because of the need of better information regarding some of the questions arising daily as to methods of controlling the disease. Perhaps there is no disease about which the general public is more misinformed than rabies. Unreasoning fear and horror are responsible for the panic which seizes people when one is thought to have been exposed to the disease. During the year 1934 there was reported only one case of human rabies in North Carolina, although the number of animals pronounced mad exceeded that of any preceding year. There were examined in the State Laboratory of Hygiene during the year the heads of one thousand eight hundred forty-seven animals suspected of being mad, eight hundred and eight of which proved to have rabies, of which number seven hundred and forty were dogs. There were distributed by us two thousand one hundred forty-five Pasteur treatments for those persons exposed to the disease, or seven hundred and nineteen more than in the previous year. These figures show the prevalence of rabies in the State, and the problem of its control. The disease caused a large loss of valuable stock, the monetary value of which can only be estimated, twenty-five horses and cattle having been found by laboratory examination to have died of the disease. Besides this number, there must have been many cattle and other livestock which were attacked by mad dogs and slaughtered to prevent them from developing the disease. This is an economic problem, and the only solution is in the strict confinement of all dogs to the premises of the owner.

The fact that only one person developed rabies is due to the efficiency of the Pasteur treatment. The relatively long incubation period enables us to establish immunity in exposed persons before the onset of symptoms. The disease is caused by a virus which is secreted in the saliva of the rabid animal and implanted through the bite of the infected animal. The dog is the natural reservoir of rabies, although all warm-blooded animals are more or less susceptible. Therefore, the control of the disease depends in a large measure on proper provision for the extermination of rabies in the dog. This could be accomplished by a six months quarantine of imported dogs and the proper restraint of the liberty of all dogs in the State, together with the destruction of the ownerless dog. Universal vaccination of dogs, as provided for by statute by the recent Legislature, should also be a factor in the control of rabies, although this measure alone cannot be depended on to exterminate the disease.

The law which requires all dogs known to have been bitten by a mad dog to be killed should be rigidly enforced. Failure to observe this law is responsible for much of the spread of rabies. If the weight of public opinion could be brought to bear on those thoughtless or negligent persons who either refuse or neglect to obey this law, you might be spared the distress and mental suffering occasioned by your children having to undergo the discomfort of the antirabic treatment. Dogs are very susceptible, and even when it is impossible to discover a wound on a dog after he has fought a mad dog, it is quite likely that he will not escape infection.

The practice of antirabic vaccina-

tion of a dog which has been bitten by a mad dog is a vicious disregard of the law, and in itself a dangerous experiment. Dogs bitten by animals known to be rabid should be destroyed, even if previously vaccinated. In many cases the attempt to immunize a dog which has already been bit by a mad dog will result in the animal going mad before immunity can be established. With the one-shot treatment now in vogue, from two to three months is required before immunity can be realized. It is equally dangerous to attempt to "keep up" a dog which is suspected of having been bit by a mad dog to determine whether he will go mad. The usual procedure is to keep him up for about three weeks and then turn him loose, at the very time when he might be expected to develop this disease. In fact, a quarantine of at least six months would be necessary to free the dog from suspicion. There are arguments for universal vaccination of dogs, and from the standpoint of the individual owner it is desirable. However, the protection obtained is never absolute and revaccination is advisable at least every twelve months. In the light of present knowledge, such prophylactic measures, in addition to the proper restriction of the liberty of the dog, would seem to be the best method of control of rabies.

Regarding what steps to take when one is bitten by a dog, we wish to give the following advice: If the dog appears normal and there seems to be no reason to believe that he is mad, he should not be killed at once, but securely confined and observed for a period of ten days to two weeks, to determine whether he was in the early stages of rabies at the time the person was bitten. Many people are prone to kill the dog at once and send the head to the laboratory for examination. This is the wrong procedure. When an animal is killed in the early stages of rabies, before definite symptoms are evident, there is a probability of the diagnosis being missed in the microscopic examina-

tion, and this necessitates an animal inoculation. A small portion of the brain of the suspected animal is injected into a rabbit and developments watched. Weeks may pass before the rabbit succumbs to the disease, and during all this time we are still uncertain as to the diagnosis. But if the dog had been confined and observed for two weeks, and remained well for this period of time, we are *sure* that he was not in the early stages of rabies at the time the person was bitten, and therefore could not have transmitted the disease. Thus in two weeks time we have proven that the animal was not dangerous or infectious at the time, and there is no need of the patient taking the Pasteur treatment. If on the other hand the dog develops rabies within the period of observation, the patient still has time to take the treatment and ward off the disease. Except in cases of bites on the face or head it is *advisable* to delay treatment until symptoms develop in the dog or until a definite diagnosis can be made. In such cases treatment may be started immediately and later discontinued if the animal proves not to be mad.

If one is bitten by a dog which exhibits symptoms of rabies, or if the animal develops symptoms during the period of observation, the head should be detached and brought or sent to the laboratory for examination. The dog's head should, in all cases, be protected from injury and packed in ice to prevent decay. The brain tissue is extremely fragile, and injury or decomposition may prevent a satisfactory examination. The dog should not be killed by blows on the head or shot in the head. Such a mistake may prevent a laboratory diagnosis. When the distinctive Negri bodies are found in the nerve cells of the brain, a definite diagnosis of rabies can be made, but when the brain is received in bad condition (mutilated or decayed), failure to demonstrate these bodies does not exclude the possibility of rabies, and in such cases the question of admin-

istering treatment to the patient must depend upon the history and symptoms exhibited by the dog.

The question as to who should receive antirabic treatment must be decided in each case, but in general we may say that only those actually bitten by a mad animal, or those who have had fresh cuts or abrasions exposed to the saliva of a rabid animal, should receive treatment. This includes, of course, those subjected to exposure to infection from an animal suspected of being mad and which has escaped, or one in which for any reason definite diagnosis has not or cannot be made.

We do not advise treatment under the following conditions: (1) Where the only avenue of infection might be through old cuts or abrasions; (2) where the only means of exposure was through handling or petting the animal; (3) drinking milk of rabid cows or eating the meat of rabid animals. Statistics show that there is no exposure through contact with wounds over twenty-four hours old; that in contact with recent wounds with infected saliva less than one in one thousand may become infected, and that in those actually bitten the possibility of infection is far less than commonly believed. No more than 3 per cent are infected

through deep wounds on covered parts of the body; 10 per cent in superficial wounds on uncovered parts; 15 per cent in deep wounds on the hand or neck, and from 30 to 60 per cent in more severely bitten patients, depending on the location of the bite and the severity and character of the wounds. These figures are all taken from results on untreated cases, and taking all persons actually bitten by rabid animals, no more than 16 per cent would develop the disease if there were no antirabic treatment given. The percentage of actual failures of treatment is so small that it need hardly be considered. Human beings are not so susceptible to rabies as are animals, and have a degree of immunity to the lighter infections. This fact, as well as the possibility of complications following the administration of the Pasteur treatment, should be considered carefully in making the decision to take the treatment, after a bare possibility of exposure. We do not advise cautery of wounds caused by rabid animals, although when done promptly and properly by a physician it may have a beneficial effect. The wound should be treated like any other similar wound and the question of the advisability of taking treatment decided promptly.

New Facts About Healthful Diets

By WARREN H. BOOKER, Director, Division of Sanitary Engineering

THE Greeks, you know, usually had a word for everything, and one of them had many sensible words on diet.

This particular Greek was old Doctor Aretæus, the leading family physician of Cappadocia. He lived and practiced some two thousand years ago, but his advice on food is just as persuasive today as it was when he gave it.

"To take milk," said Aretæus, "is pleasant; to drink it is easy; it con-

tains solid nutrition and it is of all foods the one with which we are most familiar from childhood; it is even most pleasant to the sight on account of its whiteness."

Then this able doctor of a past era goes on to describe the medicinal value of this unique food and concludes with these sage remarks: "If a person drinks much of this he needs no other nutriment; and it is indeed well that milk is both food and medicine in ill health; as a mat-

ter of fact," he says, "there are nations who live on milk and who never eat any grain whatsoever."

Now this is not the whole story of nutrition, but it is a good beginning for it. Pure milk in liberal amounts should be the foundation of every well-balanced diet. Not only is a daily quart of milk or its equivalent in other dairy products absolutely necessary for all growing children, but almost as much is desirable for each of the adult members of the family. Not less than a pint is advisable, at any rate, for those members of every family who want to be healthy and strong, and well nourished. And who in this day and age does not?

Milk is our most nearly perfect food, so-called because it contains practically all of the nutritional elements needed to nourish the human body. Milk has also been called a protective food, because its routine use helps to protect us against the deficiencies of some other common foodstuffs.

But milk is not the only protective food. Green vegetables, especially the leafy ones, are likewise in this category, and fruits belong in the general protective group. Milk and green vegetables are admitted to this select class of healthful foods, because they supply an abundance of the important lime salts needed to build strong bones and teeth and are also rich in vitamin A, which is essential to growth and good health.

When Professor E. V. McCollum of Johns Hopkins University originally proposed that the term "protective foods" be applied to milk and such vegetables as lettuce, cabbage, celery, tomatoes, spinach, beet greens, turnip greens, kale, and brussels sprouts he did not then include fruits; but fruits should be added to the list, because they supply a number of the necessary vitamins, prevent scurvy, furnish bulk in the diet, produce an alkaline, instead of an acid reaction in the human system, and are generally nutritious.

If, then, you build your daily diet

around milk, green vegetables, and fruits, you will be well nourished and possess plenty of vigor. With this foundation you can leave the remainder of the diet to the demands of the appetite, although no one should eat entirely according to whims.

There are, of course, many other valuable foods. Eggs, for example, are excellent sources of protein, vitamins, and minerals, and they are second only to pure milk in nutritional qualities. Breads and cereals are particularly useful and inexpensive sources of energy, as measured in those well-known units, the calories. Meats and fish also deserve a place in any sensible dietary regimen.

In these times of general economic stress and strain, the question naturally arises as to how a well-balanced and adequate diet can be secured with limited funds. The answer to this practical question has been given by one of our leading authorities on nutrition, Professor Henry C. Sherman of Columbia University.

This expert on food quotes with approval the maxim, "The dietary should be built around bread and milk." He tells us that the lower the level of expenditures, the more one must forego other foods and concentrate effort upon these two, supplementing them with a little of some inexpensive fruit or vegetable. A diet of whole wheat bread and milk is, in fact, virtually a perfect fare for anyone and will sustain life almost indefinitely.

Spend at least one-fifth, and preferably one-third, of the family food budget for milk and dairy products. Devote another fifth to fruits and vegetables, use at least another fifth for breads and cereals. Retrench, if you must, on meat, fish, and eggs, and forego fats, sugars, and unnecessary and more expensive vegetables. These are the wisest rules for depression period diets.

A well-balanced and adequate diet constructed around the protective foods will do much to insure the continuous good health of its consumer.

By thus building sound vital resistance, you will be more likely to escape such diseases as common colds, and you will be protected against that more serious affliction, tuberculosis. In the treatment of tuberculosis a special diet, high in vitamins and rich in milk, is frequently employed, along with other measures.

It can readily be seen what a really simple matter it is to obtain a healthful diet. Many persons seem to want to make a complicated task out of right eating, however, and there are still numerous misconceptions about this whole business of eating. Some of these misunderstandings are due to the false advice given by faddists who advocate such fallacies as vegetarianism, or exclusive diets of raw foods, or abstinence from white bread, or some other equally absurd doctrine.

Among the most ridiculous of the ravings of certain food faddists is the charge that proteins and starches will cause trouble if eaten together. In the first place, it is practically impossible to consume any reasonable variety of foods without getting both starch and protein. In the second place, Nature apparently knew more about the matter than the self-appointed critics of the combination, for in her wisdom she assembled protein and starches in a large number of natural foods.

A leading example of a food containing both sugar and protein is milk itself, the one food for which there is no other single substitute in the entire human dietary. Bread and potatoes have both protein and starch, and so do many other common foodstuffs. Put no faith in the faker who condemns mixtures of these two substances, which separately or together are desirable in human nutrition. The function of protein is to replace and repair bodily tissue, while that of the starches and sugars is to provide fuel for the human machine.

In addition to the sugars, or carbohydrates as they are more technically called, fats are likewise energy-

producing foods. Every well-balanced diet will consist of a satisfactory proportion of fats and carbohydrates for energy, of proteins for tissue-building, of minerals for bone-building and other processes, of fluids as regulators, and of vitamins for growth, strength, health, reproduction, and long and useful living. You need not be concerned about these scientific details, however, provided you get your daily quota of the protective foods which I have mentioned. Dairy products, green vegetables, and fruits will insure a copious supply of all these nutritional elements.

Do not permit anyone to tell you that vitamins are fads. These accessory food substances have been recognized for only a few years, to be sure, but a vast amount of information regarding them has been developed during this period. The more vitamins you can get in your daily viands, the better you will be for it.

Six of these invisible chemical substances are now thoroughly familiar to us, at least to the experts on dietetics. I shall spare you the usual catalog of them, and I am not going to bore you with an extended list of their functions and operations. If you will follow the suggestion to partake of liberal amounts of the protective foods every day, and will indulge regularly in green vegetables, fruits, and milk in some form, you need never have any qualms about any deficiency of vitamins in your daily fare.

In 1796 Doctor Jenner observed that dairymaids who contracted the milk disease, cowpox, from dairy cattle were apparently immune to the much more severe disease, smallpox. Acting on this observation, he took some of the harmless virus from the hand of a dairy maid who had scratched herself on a thorn and become infected with cowpox while milking, and put it in the arm of an eight-year-old boy.

This significant experiment was performed on May 14, 1796, and was the first vaccination. Later, when the boy, James Phipps, was exposed

to smallpox, he proved to be protected from the disease. This test was confirmed shortly afterward by vaccinating ten other persons, all of whom escaped smallpox. Since that time millions of persons have been protected from this dread disease by this simple, harmless, and effective procedure.

Today, then, we pay tribute to Edward Jenner, as well as to the food whose production made possible his discovery. Milk is the original food of the race, and always has been recognized as the most impor-

tant. Professor E. V. McCollum has pointed out, moreover, that throughout history the conquerors have always been users of cows. The pastoral peoples of the world who have subsisted on milk and dairy products have always been the most virile and long-lived, and have always displayed the best physical development.

In conclusion, remember that scientific nutrition is a simple matter, but an important one, and that a well-balanced diet offers to everyone health insurance which will yield a gratifying return on what we invest in it.

Summer Vacation

By J. C. Knox, M.D., State Epidemiologist

WHAT is more intriguing, more fascinating, more alluring than to plan for a summer vacation? The word itself brings pictures to mind that are as varied as are individuals. To some, a trip to the seashore epitomizes all that can be desired for a summer outing. Others care little for such a trip and much prefer a jaunt to the mountains. Each place has its peculiar position to fill for the vacationist.

The mere matter of taking a vacation has become a topic for discussion the minute it has been mentioned. In recent years such trips were not available for the rank and file of the people that make up the bulk of our population. These folks were fortunate to be able to take a trip to the seashore, to the mountains, or to some inland lake on Independence Day or on Labor Day. This day's outing began early in the morning hours and ended in the early morning of the following day. It was an ordeal for most folks, rather than the vacation or holiday for which it was designed or planned. Weary, footsore parents returned from such events with the tired, sleepy children with faces smeared with popcorn,

crackerjack, ice cream, and candies. For many such parents there was no rest until several days had elapsed, for following such orgies there were usually gastro-intestinal upsets in the children that at times resulted in serious illness and occasionally in a fatality.

Times have changed, even though there are those of us who yearn for the "good old days."

Well it is that times have changed, for these changes have been for the betterment of man's lot.

In planning this summer's vacation, one should be cautioned of the hazards which are attendant upon such a procedure. Whether one goes to the seashore or the mountains, there is a necessity for travel. Trains, busses, private autos are the means for the greatest amount of travel. Of course, there is the "thumb hiker," which is a problem unto itself. With the ever-increasing toll due to the automobile, one must consider his personal safety a matter of prime importance. All safety rules should be followed closely when one is out upon the highway. The highways are crowded on week-ends and holidays, which makes them truly unsafe, and

positively dangerous in many instances. One has only to read the morning paper after such an occasion and there in glaring headlines are gruesome accounts of accidents that have added to an already long list the names of someone's friends, loved ones, or acquaintances. Such accidents can spoil a vacation for this year, and maybe for years to come.

The food supplies, especially along the route to or from the point of destination, should be above reproach from a sanitary standpoint. Drinking water should not be overlooked; its safety should be beyond all question. Typhoid fever and other intestinal diseases very frequently owe their origin to impure water. When the vacationist camps out, as so many do nowadays, especially the young boys, the sanitation of the camp and its water supply should be definitely safe before one decides to patronize such places with his presence.

Just what health hazards may beset the summer outing enthusiast depends largely upon the place he selects to spend his vacation. Most of the well-known and largely visited resorts are quite safe from such a standpoint. The chances of contracting certain of these diseases increases very definitely with patronage of little known or obscure places and in the camps, whether run exclusively for such purposes or whether a camp-site of the individual's selection in an area little frequented. The water supplies about these camps may be a very decided menace and one which to all appearances is pure. The sight, taste, and odor of a water supply is no indication as to its purity. All questionable drinking water should be boiled before it is used for that purpose.

Prophylactic inoculation against typhoid fever should be taken without fail by the summer camper.

To the vacationist who likes to spend such times "roughing" it, ad-

ditional warnings are not out of place. Certain diseases are transmitted by the bite of insects. Malaria is the more common condition against which the camper has to guard himself. All mosquitoes are not vectors of the malaria parasite. It is hardly feasible to expect the rank and file of campers to know the malaria-carrying mosquito, but he should know something of this pest's habits, so that he may at least erect a barrier that will discourage attempts at biting. This mosquito is a night feeder and seldom, if ever, bites in the bright daylight. Campers, therefore, should use every precaution to protect themselves from mosquitoes, from the moment twilight appears until light of the next day is in full evidence. Mosquito bar or netting is a very effective and cheap means of doing this.

Recently there has appeared in North Carolina another disease which is more likely to affect the camper than other people. Rocky Mountain spotted fever, which, until the past few years, was thought to exist only in the mountains from which it gets its name, is found in North Carolina—from the lowlands of the coastal plain to the foothills of the Appalachian Mountains. The disease is primarily one of small animals, such as rabbits, squirrels, chipmunks, and the like, but it occasionally occurs in man. The ordinary wood tick or dog tick is the intermediary host that transmits the disease to man. Infected ticks feed upon man and after a period of about ten days the individual is taken ill. The fatality rate of this disease runs rather high, about 20 per cent in this State. It is advised that campers remove their clothes and search carefully for and remove ticks at least twice a day. It is necessary for an infected tick to bite an individual for a rather long time before the virus is transferred, hence the effectiveness of the above method.

Care should be exercised in hiking through unknown woods, or known

woods, for that matter. Snakes of poisonous variety fortunately are not abundant, but the occasional snake can be as dangerous as another if he should bite an individual. Most snakes will avoid man if given the chance to move without being hurried or trod upon. Campers and hikers who are properly clothed and shod for this type of outing are usually adequately protected from snake bites.

Contact with poisonous plants may cause one to be sorry that he ever thought of a vacation. Care should be taken to avoid known poisonous plants and vines.

There is nothing that can cast such a gloom over a summer resort as the tragedy of a drowning. A wholesome respect for deep water, whether at the ocean or inland, should be uppermost in the mind of the one who is enjoying the pleasure of a swim. There are too many who lack the proper respect for water that is deeper than the average individual's height. Unknown, shallow water is equally dangerous when youngsters plunge into it, which may result in a fractured skull or a broken neck. Such tragedies as I have just mentioned are entirely useless, provided a little precaution is taken. It is a long time from one summer till the next, and the newspaper accounts of these accidents are stale in the minds of those who need them most.

More than one vacation has been changed from an occasion of pleasure to one of misery by over-exposure to the bright sun, especially at the seaside. Acute sunburn may be nothing short of torture. Sunlight is beneficial for almost everyone, but care should be exercised in not exposing oneself for too great a length of time when the individual is unaccustomed to the direct rays of the sun.

A person seldom pictures himself as the principal character in an accident. Vacations could be easily spoiled if one were to think of all the

possibilities of accidents that could occur. Sane thinking and sane and safe actions during a vacation may determine whether or not it is a pleasurable event or one filled with sorrow and remorse.

WHAT MATTERS MOST

WITH a thorough understanding of the viewpoint of the Mecklenburg farmer who intermittently markets native meats, *The News* cannot but be wholeheartedly for the agitation which has as its object the "pre" as well as the "post" inspection of all meats consumed in Mecklenburg County.

It is true that the proposed ordinance, over which the City Council has backed and filled for years, will impose some trouble and a modicum of expense upon the farmers of this community. The necessity of hauling their cattle to the city for inspection before they are slaughtered, together with the cost of inspection and killing at a central agency, is troublesome. On the other hand is the testimony of expert witnesses who have told the Council that many diseases of cattle cannot be determined by inspection after the meat is dressed, except through a chemical analysis. It is said, and not denied, that a tubercular head, for instance, is impossible of determination after the meat is ready for the market, except that the suspected food is subjected to laboratory tests, which are out of the question in the ordinary process of marketing.

The cost of slaughtering and dressing, we understand, is comparatively slight: \$1.50 for a full-grown animal and half that amount for hogs and calves. The honest and conscientious farmer who sells his meat in Charlotte would do well to accept cheerfully the bother and the expense to avoid the possibility of selling diseased meats.—*Charlotte News*.

The Trial

By KATHRYN MILLER

Women's College, University of North Carolina

Something was wrong at Tommy's house.
I feared there might be a war;
But then I learned how a trial was held,
And Tommy was called to the bar.

'Twas a solemn occasion. Judge Health took his seat,
And the Health Rules, as jury, filed in.
The prisoner was brought, and the witnesses, too.
It was time for the trial to begin.

The Judge rapped the table and solemnly said,
"Witness One will please take the stand."
Sir Toothbrush arose and was duly sworn in.
He looked like a very sad man.

"O Judge," said Sir Toothbrush,
"I have to report that I haven't been used for a week.
With your permission, and if time will permit,
There are a few words that I'd like to speak.

"Teeth will be dirty if they are not brushed,
And dirt causes teeth to decay.
To have strong, healthy teeth I would like to suggest
That they should be brushed twice a day."

"Well spoken, Sir Toothbrush," Judge Health did declare;
"And now we will hear from the Clock."
"My report is, late hours and not enough rest,"
Said the Clock, with accusing tick-tock.

"And what have the rest of you to say?"
Said the Judge, looking down from his seat.
"His hair is not combed and he won't drink his milk,
And his shoes do not fit his feet."

"He says that he doesn't like vegetables and fruits."
"He eats candy all during the day."
"He cannot be healthy if he continues like this.
That, Judge, is what we have to say."

"Now let us hear the jury's report."
"The prisoner is guilty," they said.
Tommy well knew that he was all wrong,
And shamefacedly hung his head.

"Please, Judge Health, give me a chance;
I want to be healthy and strong.
Now I know how important health rules are,
I'm sorry that I have done wrong."

"O.K.," said the Judge.
"We'll help all that we can.
It takes strong boys, as you know,
To grow into strong men!"



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SOCIAL DOINGS IN DAVIE



An Unusual Child Health Day Celebration

Mrs. Green, an efficient nurse who has, for several years, conducted the Good Shepherd Church Health Center at Cooleemee, an industrial town in Davie County, always celebrates Child Health Day. This year one of the grade teachers revised the Tom Thumb Wedding idea for this occasion and made of it a health project. Mr. Good Health wed Miss Happiness. The central idea was that good health, if maintained in the home, must begin with the home, and that marriage is the beginning of the home. Dr. Lester P. Martin, Davie County physician, made an excellent talk at this celebration on vaccination as a protection against disease. The physicians present examined sixty-seven pre-school children and vaccinated each of them against diphtheria, smallpox, or typhoid fever.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
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Constipation	Hookworm Disease	Teeth
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Diabetes	Influenza	Tuberculosis Placards
Diphtheria	Malaria	Typhoid Fever
Don't Spit Placards	Measles	Typhoid Placards
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Flies	Residential Sewage	Water Supplies
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine	5 to 6 months; 7, 8, and 9 months; 10,
monthly letters)	11, and 12 months; 1 year to 19 months;
Minimum Standards of Prenatal Care	19 months to 2 years
Breast Feeding	Diet List: 9 to 12 months; 12 to 15
Infant Care. The Prevention of	months; 15 to 24 months; 2 to 3
Infantile Diarrhea	years; 3 to 6 years
Table of Heights and Weights	Instructions for North Carolina Midwives

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THE Health Bulletin



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Notes and Comment

By THE EDITOR

PEOPLE of the central and east-central sections of the State have been greatly upset for the past several weeks on account of an unusual increase in the number of cases of poliomyelitis, or infantile paralysis. During the month of June people became unduly alarmed in some localities. This is to be deplored, although it is a natural reaction on the part of the public. Up to this time there has been reported to the State Board of Health for the year a total of 257 cases of the disease with 24 deaths.

Co-operation on the part of the people generally with the Health Department officials has been excellent. In the first place, the State Board of Health has not been autocratic or dogmatic in its opinion or in its advice. It has steadfastly confined itself to giving the facts to the people day by day. It has encouraged normal activities in so far as safety will permit. It has discouraged the promiscuous gathering of young children anywhere in the area. The church people particularly have been very co-operative. Sunday schools have been practically suspended in the areas. Every sensible person has tried to do everything known to prevent the further spread of the disease.

So far most of the western section of the State has escaped this scourge. The fact is that, with the exception of two or three places, at this writing they have not had any more cases reported out there for the year than

usual. The same thing applies to the coastal resorts, such as Nags Head, Morehead City, and Wrightsville Beach.

The State Board of Health has advised the usual activities in the commercial camps, riding schools, and vacation resorts, particularly in the western part of the State, provided they do not accept patrons from the particular areas in the central east, in which the disease is most prevalent. The Board of Health has also advised such camps to open with the understanding that no one goes or comes for a period of about two weeks. Then if there is no occurrence of the disease, the camp may be considered safe.

There has been and should be no reason why patrons from other states who are accustomed to spend their summers in the western area of North Carolina should not come on as usual. All the State Health Officers, of the South in particular, have been so informed.

There is one phase of the outbreak which requires comment. That is the overwhelming demand which has been made on physicians and health officers by the public generally in areas involved for preventive vaccines. In a way this is a gratifying demonstration of the advanced information the people generally have concerning the prevention of disease through vaccination. In this case, however, the public has advanced considerably beyond

the ability of medical science to provide a special immunizing vaccine. In the first place, while scientists generally regard the disease as caused by a virus similar to smallpox, the actual germ has not been discovered. It is thought that the germ is so small that it passes through any filters when undertaking to isolate and detect it. A good many experiments with vaccines and serum immunization have been made during the past few years and discarded as unsatisfactory.

At present there are two types of vaccine which seem to promise immunity. Experiments are being made in this State with both types at this time, one of them under the auspices of the United States Hygienic Laboratory representatives. In simple language, one of these vaccines, that perfected in the New York City laboratory, and being given by the Public Health Service representatives, is composed of vaccine made from sterilized virus; the other is simply an attenuated virus and is being used by a few private physicians. Both are obtained from monkeys imported from India. The State Board of Health is at present recommending to physicians that neither of these vaccines be used by general practitioners or health officers until further experimentation confirms the success or failure of the procedures.

One difficulty in general immunization is that so few people are susceptible to the disease. Doctor Aycock of Harvard, who has experimented a long time in dealing with the disease, says that only one person in a thousand is susceptible. That figure applies to the general population, all ages, sexes, and colors. Other research workers claim that of the children under ten years of age about three per thousand are susceptible. Up to now no way has been discovered in locating those people who are susceptible or those who are immune naturally, as can be done with such diseases as diphtheria.

The State Board of Health would again advise the people to be calm, and not to be impressed by wild schemes of prevention or treatment, or by rumors or unseen dangers and so on. The orderly procedure of routine affairs, with the minimum assemblage of children particularly, is the best course to pursue.

* * *

WE would again call attention to the fact that this is the typhoid season. Although typhoid is a disease of all climes, all races, and all seasons of the year, owing to the greater ease with which the disease may be transmitted in the summer months, the disease, of course, is generally more prevalent at this time.

One of the names for typhoid used to be "Vacation Fever." Another name used to be "Autumnal Fever." The reason for that was that when people went off on vacations in the summertime in the old days, just as they do now, they very frequently came back home and developed typhoid fever, and about one out of every ten of them died.

Through the excellent work which has been done in providing pure water for municipalities and in improving the home water supply of so many farm people, through the protection of vaccination, and through the improvement in sanitation, such as the installation of better sewage facilities in the towns and cities, and the sanitary privies in the country districts, the disease has been greatly reduced during the past few years. At present it is only a small item in public health importance compared to twenty-five years ago. People should realize, however, that the same conditions prevail, and that protection against typhoid is a matter in which it will require eternal vigilance. Carelessness in dairy operation, in which an infected milk supply might be possible, a relaxation in the matter of protecting

the public water supply every minute of the twenty-four hours, every day in the year, might mean at any time a spectacular rise in the cases and deaths from this once terrible disease.

Typhoid is a disease which physicians and health officers know all about. They know how to protect from it in every way. This information has been continually passed along to the people generally, and therefore a case of typhoid fever today indicates carelessness on the part of somebody.

Up to date this year there has been reported to the State Board of Health a total of 150 cases with 18 deaths. This compares with the same period last year of 73 cases and 12 deaths.

* * *

WE cannot discuss such things as infantile paralysis and typhoid fever without bearing in mind the ever-present menace to good health in the exploitation of the people by the patent medicine interests and the various quacks. No one can pick up a radio receiver today without listening to the virtues of some patent medicine recommended for almost any disease under the sun, but which is always good for the particular disease that happens to be more prevalent at that particular time.

The radio today is in the position that the newspapers were some thirty years ago. At that time the better class of magazines and daily newspapers became disgusted with the exaggerated claims made by these exploiters of human misery, and cleaned out their own columns. This was not done until there was a rising tide of disgust among better informed people everywhere. Today no concern and no patent medicine is too dirty or too exaggerated in its claims to fail to get an honorable place on the program of any radio station accessible to the listeners in this section.

Not long ago a member of the editor's family called and told him that

there was an unusually fine musical program consisting of old spirituals and so on coming in over the radio. About the time the editor got set to listen to some of his favorite songs the music abruptly ceased, and the announcer stated that this program was being put on by a certain concern—which concern, by the way, has been selling a purgative formerly used by physicians as horse medicine—Glauber's salt, in a new and fancy name. But the lying about this particular product reaches new heights. The editor determined to see it through, however, in the hope that more good music would come. Sure enough, this program was followed by more good musical stuff that he liked. In the middle of the next program, however, the announcer's voice came through with the statement, among other things, that a dose of a common headache medicine, composed chiefly of acetanilid, would simply "knock a headache out, cure a patient in less than ten seconds after it was swallowed."

To wind up this particular program, it was all followed by a series of fine old songs by a woman singer of considerable local reputation. It in turn, however, was sponsored by an undertaker, all of which we thought was good and proper. What more natural than for the undertaker to come along immediately after excessive use of either of the two foregoing patents advertised so promiscuously over the radio these days.

* * *

SOME time ago writers in the *Journal* of the American Medical Association reported several cases of argyria, which is a discoloration of the skin or tissues resulting from the over-use of silver preparations. In this particular series ten little girls and five little boys were reported with the prospect of having to spend the rest of their lives, and face the world, with blue or

slate-gray complexions. These writers in the *Medical Journal* reported that more than seventy cases of this permanent discoloration of the skin following the use of some preparation of silver had been located in this country.

The disfigurement of all these children, who are under the age of ten years, follows the use in the nose and throat of solutions containing silver for the treatment of so-called colds or allied conditions. Argyrol, collargol, and neo-silvol were among the silver compounds involved.

Many cases among adults have been traced to the use of silver arsphenamine in the treatment of syphilis. The main danger, however, is in the promiscuous treatment of ordinary so-called colds by the drop method of the usual percentage of argyrol sometimes carelessly prescribed.

Some months ago we had an article in *THE HEALTH BULLETIN* by Doctor Root, a pediatrician of Raleigh, warning mothers against the use of such drops in their babies' or small children's noses.

The human body can retain only so much silver. If more than the average amount is taken into the body in any way, argyria develops. Such things as whether a person is a blond or a brunet are said to be a factor, as well as the amount of fat on the body, according to the medical writers.

We pass this information along to you, readers, with the observation that such prescribing is a fine thing to leave to competent physicians instead of to the boy who operates the fountain in the drug store or the girl behind the counter in the department store.

Cause and Effect

THROUGH some peculiar coincidence, a few days ago two items of material interest reached our desk on the same morning, side by side. The first item was a Department of Commerce, Bureau of the Census, provisional report from Washington. It contains a summary of live births, infant mortality, and still-birth statistics in the United States for 1934. On the front page, as a sort of prospectus of what was contained inside, was the following statement:

"Infant mortality rates were excessively high in New Mexico, 132.1 per live births, and Arizona with 103. . . . The next highest rates were 86.1, 78.9, and 77.4 for South Carolina, Georgia, and North Carolina, respectively."

In plain language, Gentle Reader, that means that in 1934 the infant mortality in the State of North Carolina was higher than any of the other states in the Union with four exceptions, namely, New Mexico, Arizona, South Carolina, and Georgia.

The next item was a copy of the *Statesville Landmark* for June 24. The item in that paper, which immediately attracted our particular attention, was a paragraph by a regular columnist in the paper. The columnist had quoted from a fellow columnist in a daily paper in another city about something, and here is the comment, which we pass along to you:

"We've never got all het up about germs, nohow. We've seen a lot of Negro babies grow up to be good work hands, and from environments that would seem fatal, if measured by the standards of our medicos. Maybe it's because the colored brethren have not been taught to fear germs that they are not pestered with them so much."

We now go back to the partial phrase, of less than a single-line comment, of the Bureau of the Census report: "All Southern States with large Negro population." This in an attempt to excuse the disgraceful position of South Carolina, Georgia, and North

Carolina in the matter of excessive infant deaths.

The *Statesville Landmark* is an important paper. We do not know the columnist, but the paper is published in one of the best of the smaller cities of this State. It is in a county that has had our admiration from boyhood, but it is also published in a county that, with the possible exception of Rockingham County and Cleveland

County, has the largest and wealthiest population of any county in North Carolina which has not yet seen fit to provide for itself a well-organized, modern county health department.

In the teacher training schools of thirty-five and forty years ago much time was devoted to a discussion of what was Cause and what was Effect. Ladies and gentlemen, we leave any farther debate to you.

Our White Flower Mothers

(Radio Talk, May 8, 1935)

By EVA H. DODGE, M.D., Winston-Salem, N. C.

NEXT Sunday we will all pause to honor our mothers. We will wear the white for those who have left us and the bright colors for those still with us. Some of you may know that in 1934 we lost 547 mothers in North Carolina through childbirth. There will be 547 more 'white flowers' this year than last, due to this one cause. Many of these deaths might have been prevented had ignorance—that enemy of civilization—not been present. It is the duty of all of us to combat ignorance and snatch from Death's hands some of those mothers. Adequate care—care of expectant mothers during the months before the birth of the baby will do much to help this situation.

A young man is pacing the corridor of the hospital—anxious and worried. A nurse comes out of the room—he rushes up to her. Let us listen in:

"Oh, nurse, how is she? Is she going to die? I can't stand it if she does!"

"She's about the same, Mr. Brown, weak. But the doctor will do the best he can, though she came so late. She hadn't been seeing her doctor before this, had she?"

"No, her mother said she had never had a doctor, and that she had raised twelve children, and so my wife didn't need one, either. We haven't much money, you know. You see, this is our

first, and I left it up to Elsie and her mother."

"But she'd been bleeding before, hadn't she?"

"Oh yes, for about four or five weeks, but she hadn't had any pain, and she wouldn't let me call anyone to see her 'til tonight, when she got so bad. Even then she didn't want me to, because her mother told her she'd have pain, and so we waited for the pains to come. Oh, nurse, save her for me, she mustn't die!"

"I'm sorry, we'll do the best we can, but it was so late—so late. If she'd only called a doctor when she first began to bleed."

The nurse walks along the corridor to another room, looking in to see about the condition of the patient there. Another tragedy of neglect, she thinks, as she watches the patient for a few minutes. The nurse tells her that the patient has never become conscious—having had more convulsions. The husband meets her at the door as she turns away.

"My wife, is she no better?"

"No, she is not improving. It looks very serious."

"You mean she'll not live?"

"It looks very doubtful now."

"The baby—what about it? Will it live?"

Birth and Infant Death Rates, 1934, By States

(PROVISIONAL)

State	LIVE BIRTHS			DEATHS UNDER 1 YEAR		
	Number	Per 1,000 estimated population		Number	Per 1,000 live births	
		1934	1933		1934	1933
United States.....	2,158,919	17.1	16.6	129,400	59.9	58.1
Alabama.....	63,493	23.4	22.0	4,143	65.3	65.1
Arizona.....	8,348	18.3	17.9	860	103.0	111.4
Arkansas.....	34,566	18.4	19.1	1,979	57.3	54.4
California.....	78,280	12.7	12.4	4,036	51.6	53.7
Colorado.....	17,839	16.9	16.3	1,295	72.6	68.9
Connecticut.....	22,215	13.4	13.6	1,085	48.8	48.4
Delaware.....	3,988	16.5	16.3	245	61.4	60.4
District of Columbia.....	10,137	20.4	20.1	662	65.3	67.2
Florida.....	26,716	17.0	16.5	1,824	68.3	62.9
Georgia.....	64,660	22.2	20.9	5,099	78.9	66.7
Idaho.....	9,329	20.8	19.1	471	50.5	47.2
Illinois.....	110,225	14.0	13.8	5,820	52.8	49.0
Indiana.....	52,349	15.8	15.3	2,960	56.5	53.0
Iowa.....	42,463	17.1	15.9	2,150	50.6	48.3
Kansas.....	32,416	17.0	16.2	1,574	48.6	53.5
Kentucky.....	59,410	22.4	20.9	3,840	64.6	58.1
Louisiana.....	42,371	19.6	18.5	2,927	69.1	70.1
Maine.....	15,719	19.6	18.9	1,112	70.7	66.3
Maryland.....	27,340	16.4	16.5	1,920	70.2	65.8
Massachusetts.....	63,828	14.7	14.7	3,164	49.6	52.0
Michigan.....	83,926	16.5	16.0	4,364	52.0	50.5
Minnesota.....	45,921	17.6	17.2	2,168	47.2	47.6
Mississippi.....	47,357	23.0	21.6	3,102	65.5	63.6
Missouri.....	58,970	16.0	15.6	3,693	62.6	55.4
Montana.....	9,925	18.5	16.7	532	53.6	51.5
Nebraska.....	25,085	18.0	17.4	1,149	45.8	49.3
Nevada.....	1,424	15.1	14.5	83	58.3	73.2
New Hampshire.....	7,869	16.7	15.7	478	60.7	55.9
New Jersey.....	54,541	12.9	13.4	2,678	49.1	46.3
New Mexico.....	12,210	27.9	28.4	1,613	132.1	136.1
New York.....	185,615	14.2	14.4	9,634	51.9	53.6
North Carolina.....	79,704	24.1	23.0	6,169	77.4	66.0
North Dakota.....	14,553	21.2	19.2	833	57.2	60.0
Ohio.....	99,906	14.6	14.1	5,380	53.9	52.7
Oklahoma.....	47,077	19.0	17.8	2,845	60.4	56.4
Oregon.....	13,075	13.2	12.4	520	39.8	40.3
Pennsylvania.....	160,238	16.3	16.0	8,812	55.0	53.4
Rhode Island.....	10,349	14.7	14.7	558	53.9	55.5
South Carolina.....	42,029	24.0	23.1	3,619	86.1	73.2
South Dakota.....	12,956	18.4	18.3	764	59.0	54.8
Tennessee.....	52,894	19.6	18.8	3,863	73.7	69.3
Texas.....	116,603	19.2	17.9	8,061	69.1	75.5
Utah.....	12,552	24.1	23.0	622	49.6	47.6
Vermont.....	6,598	18.3	17.0	347	52.6	53.0
Virginia.....	52,375	21.4	21.0	3,805	72.6	68.5
Washington.....	22,508	14.0	13.1	967	43.0	38.8
West Virginia.....	41,488	23.2	20.4	2,792	67.3	68.2
Wisconsin.....	51,419	17.1	16.8	2,541	49.4	48.5
Wyoming.....	4,565	19.7	18.2	242	53.0	54.7

NOTE: There is a slight difference in the figures for North Carolina in this report from those given on the opposite page. The Washington report includes a few later reports of deaths. All three tables on both pages are provisional.

Birth and Infant Death Rates, 1934, By Towns

(PROVISIONAL)

Town	LIVE BIRTHS			DEATHS UNDER 1 YEAR		
	Number	Per 1,000 estimated population		Number	Per 1,000 live births	
		1934	1933		1934	1933
Asheville.....	992	18.9	17.9	74	74.6	76.7
Charlotte.....	1,732	19.6	17.9	166	95.8	80.3
Concord.....	259	21.4	18.9	25	96.5	117.9
Durham.....	1,365	23.2	21.6	152	111.4	87.2
Elizabeth City.....	204	20.0	20.0	17	83.3	83.3
Payetteville.....	402	29.1	23.3	40	99.5	162.0
Gastonia.....	539	30.3	22.8	48	89.1	74.1
Goldsboro.....	326	20.9	19.2	47	144.2	143.8
Greensboro.....	1,156	20.1	17.8	74	64.0	64.5
High Point.....	795	19.7	18.7	69	86.8	71.3
Kinston.....	319	27.5	22.8	42	131.7	132.6
New Bern.....	245	20.4	20.0	25	102.0	83.3
Raleigh.....	823	21.1	18.8	84	102.1	115.6
Rocky Mount.....	498	21.8	19.4	68	136.5	124.4
Salisbury.....	335	19.1	19.3	30	89.6	68.2
Shelby.....	305	25.4	22.8	18	59.0	36.6
Statesville.....	227	20.8	20.6	27	118.9	84.4
Thomasville.....	249	23.1	21.4	23	92.4	56.3
Wilmington.....	798	24.7	24.2	81	101.5	53.8
Wilson.....	376	28.9	26.2	60	159.6	134.9
Winston-Salem.....	1,596	20.3	19.4	158	99.0	92.4

"The baby was very small, and it only breathed a little while."

"Yes, I know, we didn't expect it so soon. You see, she wanted her doctor at home to care for her and we were going tomorrow so she could be with her mother—but she'd complained of headache so long, and for two days she'd been saying everything looked hazy and dark. Do you think that was the beginning? Should I have had a doctor then?"

"Yes, and months before then, too. Her trouble doubtless started before that. Do you mean she'd never seen a doctor?"

"Oh, no, she wanted her family doctor at home, as she'd known him ever since she was a child. She was afraid and did not want a strange doctor to examine her."

And so the nurse goes on with a double tragedy bearing on her heart. Preventable tragedies. To be placed at the door of ignorance. The young man didn't know—the wife didn't know—the grandmother didn't know. Whose is the responsibility? Yours and mine, you fathers and mothers listen-

ing in. You grandmothers, you friends. All of us. But you say how can we find out just what care for expectant mothers is? First and foremost, see that all expectant mothers go to their doctors early. In some cities there are clinics provided for those who cannot afford a doctor, where any expectant mother can get the care she needs. And secondly, a postal card sent to the State Board of Health, Raleigh, will bring literature for the expectant mother and an outline of just what the minimum prenatal care includes. The minimum care that an expectant mother should have means regular visits to the doctor, where a physical examination of the heart and lungs will be made early in the visits. At each visit the blood-pressure and urine will be examined; also the patients weight taken. Adequate diets, rest and exercise will be prescribed. Then six weeks after the baby comes another visit should be made to see that the mother is in a normal healthy condition.

Mrs. Smith has been going to see her doctor regularly ever since she

Birth and Infant Death Rates, 1934, By Counties

(PROVISIONAL)

	Total number births	Number deaths (under 1 year)	Rate per 1,000 live births		Total number births	Number deaths (under 1 year)	Rate per 1,000 live births
Entire State.....	79,556	6,072	76.3	Johnston.....	1,602	115	71.8
Alamance.....	1,077	55	51.1	Jones.....	306	28	91.5
Alexander.....	342	16	46.8	Lee.....	378	27	71.4
Alleghany.....	143	5	35.0	Lenoir.....	896	100	112.2
Anson.....	749	53	70.8	Lincoln.....	576	47	81.6
Ashe.....	576	41	71.2	McDowell.....	589	46	78.1
Avery.....	441	22	49.9	Macon.....	421	24	57.0
Beaufort.....	859	76	88.5	Madison.....	579	39	67.4
Bertie.....	758	92	121.4	Martin.....	780	65	83.3
Bladen.....	729	66	90.5	Mecklenburg.....	2,501	217	86.8
Brunswick.....	467	36	77.1	Mitchell.....	479	29	60.5
Buncombe.....	1,934	124	64.1	Montgomery.....	357	18	50.4
Burke.....	772	32	41.5	Moore.....	593	39	65.8
Cabarrus.....	1,014	94	92.7	Nash.....	1,397	137	98.1
Caldwell.....	966	66	68.3	New Hanover.....	845	91	107.7
Camden.....	118	12	101.7	Northampton.....	534	31	58.0
Carteret.....	357	22	61.6	Onslow.....	447	35	78.3
Caswell.....	434	19	43.8	Orange.....	434	34	78.3
Catawba.....	1,105	64	57.9	Pamlico.....	212	9	42.4
Chatham.....	458	33	72.0	Pasquotank.....	395	40	101.3
Cherokee.....	442	20	45.2	Pender.....	418	29	69.4
Chowan.....	275	40	145.4	Perquimans.....	244	18	73.8
Clay.....	151	12	79.5	Person.....	654	26	39.8
Cleveland.....	1,281	61	47.6	Pitt.....	1,486	159	107.0
Columbus.....	1,170	110	94.0	Polk.....	233	24	103.0
Craven.....	685	54	78.8	Randolph.....	864	42	48.6
Cumberland.....	1,248	86	68.9	Richmond.....	870	56	64.4
Currituck.....	127	10	78.7	Robeson.....	2,060	182	88.3
Dare.....	111	5	45.0	Rockingham.....	1,395	88	63.1
Davidson.....	1,167	83	71.1	Rowan.....	1,217	88	72.3
Davie.....	357	25	70.0	Rutherford.....	1,050	51	48.6
Duplin.....	986	69	70.0	Sampson.....	1,102	78	70.8
Durham.....	1,686	170	100.8	Scotland.....	539	57	105.8
Edgecombe.....	1,257	138	109.8	Stanly.....	695	31	44.6
Forsyth.....	2,338	209	89.4	Stokes.....	519	38	73.2
Franklin.....	715	50	69.9	Surry.....	1,029	68	66.1
Gaston.....	2,045	159	77.8	Swain.....	345	16	46.4
Gates.....	219	15	68.5	Transylvania.....	235	19	80.8
Graham.....	153	11	71.9	Tyrrell.....	148	15	101.4
Granville.....	753	59	78.4	Union.....	1,003	70	69.8
Greene.....	581	47	80.9	Vance.....	685	70	102.2
Guilford.....	2,790	177	63.4	Wake.....	2,009	159	79.1
Halifax.....	1,567	130	83.0	Warren.....	726	57	78.5
Harnett.....	1,135	72	63.4	Washington.....	328	36	109.8
Haywood.....	838	64	76.4	Watauga.....	399	23	57.6
Henderson.....	561	34	60.6	Wayne.....	1,266	123	97.2
Hertford.....	452	52	115.0	Wilkes.....	1,049	57	54.3
Hoke.....	354	25	70.6	Wilson.....	1,283	124	96.6
Hyde.....	173	7	40.5	Yadkin.....	368	23	62.5
Iredell.....	1,100	93	84.5	Yancey.....	493	25	50.7
Jackson.....	507	34	67.1				

thought she might be pregnant. Let us listen in on an office visit:

"How-do-you-do, Mrs. Smith, how are you today? Any headaches?"

"Doctor, I have been feeling fine until a few days ago—when my head began to ache. There were black spots dancing before my eyes, too."

"Why didn't you call me about it?"

"Well, it wasn't very much. I thought it didn't matter, but as you asked, I thought I'd mention it."

"Are your ankles swelling?"

"Oh, yes, but Mrs. Jones says everyone expects that."

"Let's see how much you weigh. Yes, 140. Do you realize you have gained five pounds in the last two weeks? Now I'll have Miss Davis examine the specimen, while we see what your blood pressure is."

"Oh doctor, I forgot the specimen. You see, I was in a hurry."

"Now, Mrs. Smith, I'm afraid you do not realize how important it is for us to examine a urine specimen each visit. You see, it is just another guide post for us doctors in watching your general health, and also just how your kidneys are reacting to the added burden of pregnancy. I'm sure now that you understand, that hereafter, you will make it a point to remember to bring it."

"Yes, doctor, I never knew it was important—is my blood-pressure high?"

"No, but it is higher than last time, and that gain of five pounds in two weeks is significant. That means we shall have to put you onto a diet and see that you have the proper elimination."

And so Dr. Hawks tells her what she should eat and the proper medicines to take.

Let us listen in again to Mrs. Smith's next visit:

"How are you today, Mrs. Smith?"

"Oh, doctor, I feel so good. No more headaches—and would you believe it—my ankles are like a young girl's! I'm sure I'm better now and here is the

urine specimen. You see, I did remember to bring it. I hope it will be all right this time."

"I'm sure it will be, for the one you sent by Mr. Smith showed only a trace of albumin. Now let me see what the blood pressure is. Fine. Just what it was when you first came to see me, and Miss Davis reports that the urine is normal. You have lost three pounds this week, too. And all that swelling has disappeared as well. If at any time you should have any headache that persists—or black spots before your eyes, or things look hazy, or if you have any pain in the pit of your stomach, you are to let me know at once."

"I surely will, for I can see what a difference last week has made. I told my neighbor about what you said and she went back to her doctor and told him about her headaches and swellings. She lost her last baby. She didn't see a doctor and the mid-wife came in at the last minute. I told her you said everyone should have the right care early."

"Mrs. Smith, you have been a real missionary—one who carries a message, you know. I wish that every woman who knows what prenatal care means would tell her neighbors as convincingly as you have. Now, see Miss Davis and get an appointment for next week so we can be sure this improvement will be permanent."

And so we see that early and careful watchfulness means comfort for the mother and safety for her unborn babe. It is necessary for all expectant women to see that they have proper care in order to prevent these disturbances of pregnancy which, if allowed to go unchecked, may result in severe illness of the mother—occasional death with the loss of the baby. Often false modesty prevents a woman from going to her doctor, for she does not want to be examined. Little does she realize that she may be placing a high price on her life,

or that of the child, by her attitude, as physical examination is an essential part of prenatal care. It gives her doctor a chance to help correct any slight disorders which may occur and be prepared for any emergencies which may arise.

Ladies and Gentlemen, I challenge

you to give this matter serious thought and whenever and wherever possible—exert your influence to see that our expectant mothers go early to see their doctors, so that next year there will be fewer white flowers worn for the mothers dying in childbirth from preventable illnesses.

Convalescent Care for Poliomyelitis (Infantile Paralysis) Patients

By JOSEPHINE L. DANIEL, R.N., *Consultant in Public Health Nursing,
Division of County Health Work*

MUCH has been written about the adjustment of an individual to life to insure happiness and success. It is also an accepted fact that a single experience in one's early life such as a serious illness and the treatment he receives during the convalescent period of that illness, may cause maladjustment in later years.

Poliomyelitis (infantile paralysis) has an acute period of illness and the patient needs constant skilled medical attention. The convalescent period is a long slow one and the mother, or nursing attendant, should understand the progress of the disease in order that the nursing care and treatments will lessen future disability and at the same time allow that child to develop into a well adjusted and happy individual.

The latest prescribed method of treatment for the poliomyelitis (infantile paralysis) patient is to achieve absolute rest of the affected muscles or group of muscles involved. After muscle tenderness has disappeared, re-education of the muscles may be possible if exercises are prescribed by a physician.

However, it is the period before muscle tenderness has disappeared with which we are concerned. Provision must be made to amuse the child during the long days of absolute rest after the acute period has passed. The fol-

lowing suggestions must be adjusted to each individual patient. The mother, or attendant, should be near enough to direct his interests and activities by introduction of different materials. No matter how young the patient is, a wholesome attitude towards his affliction should always be present.

Suggested equipment which can be assembled at a minimum cost for the convalescent period of a Poliomyelitis (infantile paralysis) patient is listed below:

1. *Bed Table:* Anyone handy with a hammer and nails can construct a practical bed table from a wooden packing box 20 x 12 inches. Remove the two sides; this leaves the two ends connected by a board which serves as the top. Since the table will have regular use, it would be wise to sandpaper it thoroughly and cover with a coat of enamel in order that it may be frequently scrubbed with soap and water. A large table clip should be provided if the child does not have the use of both arms and hands.

2. Assorted colored sheets of paper: 10 x 12 inches.

3. Light weight cardboard.

4. Short lengths of flowered wall paper.

5. Jar of library paste.

6. Pair of blunt scissors.

7. Colored pencils, or crayolas.

8. Cut out pictures — Christmas or picture postal cards and funny papers.

9. Toothpicks and unshelled peanuts, button doughnuts, or small fruit or vegetables in season.

10. Wooden beads and bodkin and cord.

11. Soap-bubble pipe and soap.

12. Molding clay, or carpenter's putty.

13. *Miscellaneous*: Small pine branches, corks, shells, bits of colored stones, clean chicken feathers, etc.

The above articles can be used in various ways. Scissors, crayola, colored paper and paste can be used in making scrap books, paper chains, cutting silhouettes, paper dolls, etc. The molding clay or putty can be made into farm

buildings, or Indian villages, and the people and animals can be made from peanuts, fruits, or vegetables put together with toothpicks. The miscellaneous articles can be used in building and decorating the villages.

Older children and adults will enjoy more complicated amusement such as loom weaving, knitting, etc. Materials for weaving can usually be obtained from any large department store.

It must be remembered, however, that care must be taken to prevent fatigue. It is wise to allow a regular schedule, first, a short work period, followed by a rest period. Frequent change of materials is also advised as a diversion.

Public Health Activities in the Field of Malaria Control

By M. R. COWPER, State Board of Health

ONLY a few citizens of the United States realize what a prominent part their Government has taken and is still taking in public health work. One of the major vocations of any Government interested in the welfare of its people is that of disease control, for diseases have played a far more prominent part in history than is recorded in the familiar textbooks on that subject. This paper will be devoted to a discussion of one very common southern disease—malaria.

The ultimate control of malaria in America is a Herculean task. The problem of successful restraint, especially in the southern United States, is one that requires years of gradual effort by the people, with the assistance of trained Government experts in that field. However, it is not impossible. This has been proved by the many successful individual attempts that have been completed. Most prominent among these is the famous work done by the United States Government in

the Panama Canal Zone under the direction of General Gorgas. Malaria is a major medical, engineering, and educational health problem to be combated by the co-operation of public workers in each of these lines of activity.

Through long and tedious study world-famous scientists have given to mankind rather complete information concerning the malarial parasites and vectors. Noted physicians have evolved processes for the medication and treatment of patients, while engineers in a more limited field have proved that their technical knowledge and methods are capable of eradicating the vector. It is now the task of public health workers to utilize these forces and free the southern United States from this famed malady.

The most important feature in the control of this disease is, as in practically every other real problem, that of education. One still finds those persons who will swear that malaria is caused by contaminated drinking water,

or that it comes from inhaling the air near swamps and standing water. The mosquito theory to them is a myth and a good joke, and remains thus until an epidemic such as occurred in Camden County last year causes them to put their frantic faith in any one who offers to help. But lessons learned on occasions like the one just mentioned are soon forgotten until another cycle of disease again ravages the neighborhood. It is only with the impetus of a disastrous epidemic that public sympathy for health work is aroused. An encouraging note is the fact that engineering schools all over the country are now teaching to technically inclined persons the primary points of malaria epidemiology.

Malaria is perhaps the most general disease now existing in the United States, although its prevalence is practically limited to the Southern States. It is not a killer, as many of the other diseases, but one which renders its victims almost useless, a disease that greatly impairs the mental and physical ability of persons who have it. Its effect has always been the same, namely, that people residing in a malarious territory are very lazy and unambitious. Studies have shown that the ability of a person to earn a living when he is a victim of malaria is only about two-thirds as good as a person similar in every respect who does not have the disease. Therefore, one can understand that it is not the mortality rate which concerns health authorities, but rather the condition of its victims. It is also an economic concern in that the financial returns on every malaria control investment have been enormous.

Early public health workers have carried the fight on malaria through many stages. It was discovered long ago that, although a disease of man, it was spread by a certain type of mosquito of the genus *Anopheles*. The malarial parasite is taken from the blood of one person by this mosquito while she sucks the blood of an infected indi-

vidual. The parasite passes through the digestive tract of the mosquito, changes in form and finally infects its salivary glands. The mosquito in this state is then capable of infecting or re-infecting the victim of its bite. As in the case of all other mosquitoes, water is necessary for the breeding of the malarial specimen. The favorite breeding places of this type are furnished from ponds, lakes, ponded swamps, and their like, and where vegetation and floatage are plentiful on the surface.

It takes from 10 to 14 days for an *Anopheles* mosquito to pass through the four stages of its life history. First, the egg; then the larva and pupa stages; from the pupa it emerges an adult winged insect, having a natural instinct for finding warm-blooded animals or human beings, from whom it derives food. The blood thus gained is also necessary to mature their eggs. It is from this life history that the best method of malaria control has been derived. The 10 to 14 days mentioned above is their period in which quiescent water, such as ponds and lakes with protective vegetation is necessary to the mosquitoes. Therefore, to get rid of such areas would break the cycle of the *malaria carrier*, the *Anopheles Quadrimaculatus*, to use its technical name. This is most practically accomplished by drainage, which is the only permanent solution of the problem.

The value of drainage to agriculture has long been realized, but its value to malaria control is a comparatively recent development. When draining for agricultural purposes one wishes to lower the water table, but for mosquito control the purpose is to drain off the standing water, which is capable of breeding the *Anopheles* mosquito. In practically every instance good agricultural drainage could have been effective against malaria had the engineers in charge realized this fact and constructed the canals in such a way as to keep their water contents from pond-

ing. The natural conclusion, therefore, is that drainage with its economic and health advantages can always be employed to solve the malaria problem. But in many cases it can not. Drainage is a very expensive proposition: it often requires large outlays of money for labor and dredging machinery. Besides this there is the expensive engineering item and the legal costs that have always burdened this type of construction work.

It is evident why persons residing in thinly populated areas have been and always will be unable to meet the costs of well-designed drainage projects. These people unassisted are unable to meet even the initial costs of such work, and the best designed system of canals will soon fill up and lose its value unless maintained constantly. It is only the cities, towns, and densely populated rural areas that can afford to protect themselves and their properties with expensive drainage. For other individuals, there are several less costly methods of control.

The *Anopheles* mosquito does the greater part, if not all, of its blood-sucking after dusk and before dawn. It cannot stand the daylight. The first of these less expensive control methods is, therefore, the proper use of good screens. These protect those who have malaria from infecting mosquitoes, and will in turn protect those who are well from infection by the mosquito. The best results from screening have been obtained in only those homes which are tightly constructed and carefully screened. If the person protecting himself in this way should leave his house after dusk his protection is lost. Screens can be installed at very little cost and the cracks and holes in the average rural homes may be economically patched. Free literature explaining this type of protection is always available at the State Health Department. But screens have many other disadvantages which will always keep them from affording anything like perfect

protection. Most of these disadvantages are due to the fact that effective screening is too much dependent upon the variable personal element, that is, the care and use accorded them by the people whom they protect.

There are a number of places that can have ideal protection from the malarial vector by executing only a small and inexpensive amount of minor drainage. On the other hand, there are those places where drainage is not practicable and cannot be economically justified. Included under this head are the impounded reservoirs of water for power and for municipal consumption, the resort lakes and parks. Here the breeding places cannot be destroyed, and it very frequently happens that such menaces are in the proximity of densely populated areas. Effective control in these instances has been gained through the application of one of the several well known methods mentioned below, or a combination of all. The scientific variations of water levels under certain conditions have proved useful, particularly when *Gambusia*, the larve-eating top minnow, is abundantly present in the waters. The periodic removal of vegetation and floatage from the water's surface has also given excellent results in those lakes from which basin all trees and other forms of matter have been cleaned. It has been found that lakes and ponds with steep sides and well-defined margins are not conducive to mosquito propagation; while those same areas containing numerous shallow flats and undefined margins have an opposite result and require a great deal of expensive attention to their control problems. In such places the frequent application of larvicides is necessary. This preventive is another less costly method of control.

There are many different types of mosquito larvicides now sold on the market. Practically all of these commercial brands are oil mixtures, because these are effective killers of all types of mosquito larvæ. To the experi-

enced health worker the use of oil is poor economy unless some competent entomologist has proved beyond the shadow of a doubt that the types of mosquitoes found in the areas involved are harmful to man. As you may know, there are many species of mosquitoes that will not attack a human being. It is also true that the only type having any public health significance is the *Anopheles*. In such cases as this it is always the part of economy to use Paris Green dust mixtures as the larvicide. One part of Paris Green to ten parts of any fine base dust, such as hydrated lime or road dust, is sufficient to poison all the *Anopheles* larvæ in a given area, because they feed on the surface. These mixtures may be economically and hastily applied on the windward side of the breeding area with either a hand or power duster, and only a gentle breeze is required to distribute it over all the vulnerable spots, regardless of the amounts of floatage and vegetation present on the water's surface. Oiling is sometimes economical where waste oil is available in large amounts and the mixing materials cheap. The most popular mixtures include the heavy waste oils from gas plants or service stations with smaller amounts of kerosene and oils of pyrethum. These mixtures are oftentimes difficult to apply. The period between the application of larvicides on any particular area varies from ten to fourteen days, the most suitable period being ascertained only after scientific field tests have been made. Larvicides are not harmful to fish life, nor do they in any way endanger the water for municipal consumption. Many persons in North Carolina could easily afford to protect themselves from malaria and pestiferous mosquitoes by the careful application of larvicides.

The United States Government, having already put an end to yellow fever, is now making a concerted effort to counteract malaria in this country. It has approved the use of Federal Relief

funds for this purpose by the United States Public Health Service through its State agents, the Boards of Health. The North Carolina State Board of Health now maintains an experienced staff of engineers and malariologists to supervise malaria control work. A great deal has already been accomplished, but more remains to be done. A report to this department of any malarial condition existing in this State and not yet known to the State Board of Health will bring our co-operation and interest. Will you not aid us in ridding North Carolina of this disease?

Plain Envelopes

Frequently the State Board of Health has requests from some citizens of the State for literature which they expressly specify must be sent in plain envelopes. To all such people, no matter what the reason for this is, we are compelled to state that we do not have any such envelopes. We must send our literature out in the official stationery of the Board. One of the important reasons for this is that so many people write without giving complete post-office address, but unless the outside of the envelope bears the address of the sender, loss of time and much expense is involved. To all our friends we wish to say that we shall be glad to send you promptly any literature that you write and ask for, which we have listed every month on the second page of THE HEALTH BULLETIN, but we cannot send in anything except the official stationery of the Board.

Age

Age is a quality of mind—

If you have left your dreams behind,

If hope is cold,

If you no longer look ahead,

If your ambition's fires are dead,

Then you are old.

—THE KALENDS.



The Health Bulletin

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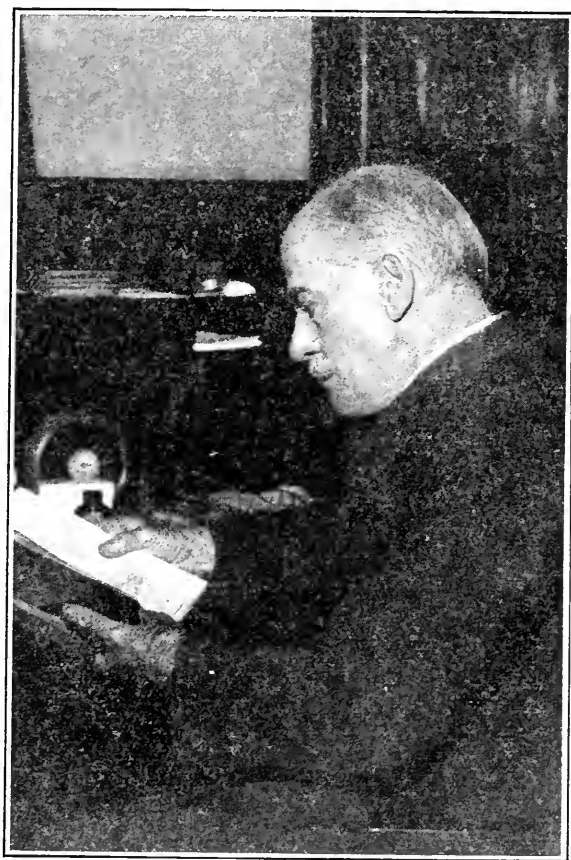
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No. 9

COLONEL FRED A. OLDS, RALEIGH, 1853-1935



The Beloved Friend of All North Carolina School Children

The above picture of Colonel Olds, Founder and Director of the North Carolina Hall of History until his death in July, was made when he was eighty years of age, October 12, 1933. During his service with the Hall of History he spoke to groups of school children in one or more places in every county in the State. He piloted many thousands of teachers and school children about Raleigh on the occasion of their visits to the Capital. His inspiring talks, packed with important historical information and an appeal for clean living and high ideals, will be remembered a long time by the present generation of school children.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
Diphtheria	Malaria	Typhoid Fever
Don't Spit Placards	Measles	Typhoid Placards
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Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough
	Sanitary Privies	

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine	5 to 6 months; 7, 8, and 9 months; 10,
monthly letters)	11, and 12 months; 1 year to 19 months;
Minimum Standards of Prenatal Care	19 months to 2 years
Breast Feeding	Diet List: 9 to 12 months; 12 to 15
Infant Care. The Prevention of	months; 15 to 24 months; 2 to 3
Infantile Diarrhea	years; 3 to 6 years
Table of Heights and Weights	Instructions for North Carolina Midwives

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THE Health Bulletin

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Board of Trade Epidemiology

THE purpose of a board of health, state or local, is to protect the people in its jurisdiction, in so far as it is possible to do so, from the ravages of disease. The interests of a health officer are scientific and not political. His responsibility is for human life and not for money. He must paramount health instead of dollars. He must be fair to the point of judicial accuracy. As the science of disease prevention has made progress, it has been possible more and more to protect the people from preventable disease at a minimum cost in time and money. The modern control of municipal water supplies and sewage, together with the protection afforded through immunization has about eliminated most of the scourges of the past. Diseases such as typhoid, typhus and yellow fevers, diphtheria, plague, dysentery, and smallpox are no longer looked upon as the dread killers of the people of whole cities as they once were. Therefore the necessity for drastic quarantine measures are seldom necessary now.

One of the few remaining diseases in which the exact cause, prevention, and mode of transmission is not definitely known is acute anterior poliomyelitis, or infantile paralysis. It is a disease rightly feared by people everywhere, and particularly by the parents of young children. The after effects of some cases leaves the crippling marks of its presence for life.

During June, July and August central and eastern North Carolina had to deal with an unusual outbreak of the disease. Panic and hysteria has been its ally in many sections, and sordid selfishness has appeared in others. The State Board of Health has been criticised by a few business interests because it consistently gave out the facts daily about the presence of the disease. For the most part, however, people have co-operated splendidly, especially the churches and all State departments. The officials of the Board followed the advice of the United States Public Health Service and other states which have dealt with the disease in epidemic form, and cautioned against the assemblage of persons, especially children for any purpose in the affected areas. But the Board has repeatedly urged people to be calm. Not to become frightened and to pay no attention to rumors. The Board sought and received the assistance of the best students of the disease in the country, and the officials believe that in handling the situation as they have the interests of every individual and institution in the State has been fully safeguarded.

In the old days The Board of Trade which was somewhat of a predecessor of our present day chamber of commerce and merchants association, insisted on handling all epidemics. Their methods were simple. They suppressed all information about the presence of an epidemic until everybody and everybody was ruined. That day ought to be past.

School Health Supervision

A Pleasant Reflection on Twenty Years State Service

TWENTY years ago this month the writer undertook the first State Medical Inspection of School Children ever inaugurated in North Carolina. The work that winter and through the winter following was in the nature of an experiment. During those two school years appropriations sufficient to carry on the enterprise was secured from local county or city governing boards. The State Board of Health had no funds for the purpose. Three physicians were employed for their full time. They were in complete sympathy with the views of the writer who directed the work, and two of them became from then on his warm personal friends. They examined school children enrolled in the elementary or grammar grades in the public schools of twelve counties. A total of twenty thousand children were personally examined. Lectures on public health were given in every school and as many parents as could possibly be induced to come were present. It was long before the formal establishment of the Parent Teacher Association in this State. But it can be said truthfully that this was the first real parent-teacher work done in the State.

Conditions in almost every school were found to be appalling. The teachers were for the most part overworked and underpaid. They knew nothing of public health in the modern sense. Sanitation and sanitary facilities were notable only for almost complete absence. The physical condition of the most of the children was deplorable. Teeth were terrible, and diseased throats were the rule. The buildings were poor and badly designed as to light and heat. In short it was a discouraging prospect.

The most encouraging feature in the whole situation was the welcome attitude of most of the teachers in the primary and elementary grades. Many of the principals were cold and indifferent, but the teachers who were facing the problems every day gave us a sympathetic welcome which is cherished to this day. The encouragement and helpful assistance of the rank and file of the teachers during these twenty years has been a stimulating experience. They have been apt students of public health. They have realized the need for the practical application of public health knowledge in the everyday lives of their pupils. And they have valiantly done their full part. In all humility we dedicate this issue of the *HEALTH BULLETIN* to the teachers of North Carolina. Our daily contact with them for the past twenty years has been an inspiration to us.

Today public health has an honored place in nearly all the schools of every county. In the twenty years gone by many of the county superintendents of schools have been strong supporters of the public health cause. They have championed the right of the children to an education in health as well as in mathematics and English.

Twenty years on one job is a rather long time. It affords an opportunity, however, to measure standards. And we do not hesitate to say that the health of school children is today incomparably better than it was twenty years ago. If the coming generation of children now beginning school will avail themselves of the information and protection provided for them by the public health agencies of the State, twenty years from now they should put to shame the old Greek ideal at its best.

A Wise Expenditure of Federal Funds

THE Division of Sanitary Engineering of the State Board of Health reports on the first of August that a total of 171 cities and towns of North Carolina are contemplating waterworks and sewer improvements under the new Public Works Administration and Works Progress Administration. The nature of this work is either outright installation of water and sewer systems in a total of 78 towns that have never had any public system, or an extension in the rest of these towns and cities of the present facilities to enable a larger percentage of the people to live on water and sewer lines.

The fact that some of these towns which are contemplating such work have as few as 150 people is all the more significant because in the past water and sewer facilities have been looked upon strictly as a city convenience. When the small towns of the State are equipped with these comfort and health-protecting facilities, it is only natural to assume that the incentive on the part of more well-to-do farmers in all sections of the State to equip their homes with private supplies will mean the installation of a great many more such systems. There has never been, and probably never will be again, a more opportune time for these cities and towns to install and extend this work. The Federal Government is granting an appropriation of 45 per cent of the total amount of the loan, with the rest of it payable at only 4 per cent interest.

In modern civilization nothing is more essential to the health and safety of a family than to have an adequate and safe water supply and safe methods of sewage disposal. The Department of Sanitary Engineering of the State Board of Health has carried

forward this enterprise to all sections of the State in a most commendable manner. Their effort has been in effect a campaign of health education and information in an endeavor to get the people of the State to take advantage of the unprecedented opportunities now offered by the Federal Government.

The department has not confined all its activities to this effort. It has also made every effort to induce the building of sanitary privies of an approved type at every home in the rural districts of North Carolina which do not already have such facilities. The meaning of this dual enterprise is that the smaller homes in what has been heretofore termed the less desirable sections of the larger cities will have the availability of water and sewage. For the smaller towns it means that a still larger number of the same class of people will have the same protection and comforts of the larger city dwellers. In addition, it means that the poor man living in the country on the farm or in the outlying suburban districts of the cities and towns will have the protection afforded by a sanitary privy.

The most recent general survey proved that about 33 per cent of the farm homes in this State have no toilet facilities of any kind, not even a bur-lap leanto. An inordinately large number of babies still die from the bowel diseases contracted through polluted drinking water or infected food. This pollution results from the contamination of colon bacilli distributed through unsanitary disposal of human discharges. Hookworm disease and typhoid fever also remain in many sections of the State. To control such diseases a safe water supply and sew-

age system, either public or private, must be available to every individual.

In a letter to the State Health Officer and the head of the Division of Sanitary Engineering, Dr. H. G. Baity, of the University of North Carolina, who is Acting State Director of the Federal Emergency Administration of Public Works, has stated in few words a synopsis of the desirability of this type of work. Doctor Baity writes:

"Our organization is interested, of course, in providing the means with which to do useful and socially desirable permanent public works of all types. However, owing to their health promotive character and their influence upon the standards and enjoyment of living, I am disposed to place water and sewer projects at the head of the list as to desirability and preference. Everything considered, I can think of no way in which Federal funds may be expended as advantageously as in the provision of these facilities. I trust that a large proportion of our allotment will be devoted to works of this character, and, if so, I do not expect in the years to come to look back upon my experience with the PWA with any regret."

In the foregoing Doctor Baity emphasized the fact which should be uppermost in the minds of all people engaged in the expenditure of relief funds, and that is that the expenditure should be made on projects which are permanent and socially desirable, and which protect the public health.

Notwithstanding the progress which has been made in the last few years in the building and equipment of school plants, in North Carolina today only about 30 per cent have satisfactory water supplies, and only about 24 per cent of the school buildings of the State have satisfactory sewage. Thirty-three per cent of the schools have no water supplies at all, and 19 per cent of the schools have no toilet or sewage facilities of any kind. It seems to us that work of such importance, from the standpoint of the public health and well-being of the citizens of this State, should receive the active encouragement and assistance of every sensible citizen in the State.

Do Parents Fail Their Children?

By MARGERY J. LORD, M.D., *School Physician, Asheville*

MOST parents want for their children more out of life than they themselves had. Their ideas of developing their children lean far toward the educational, social and cultural side of life. All these are well worth attaining but it is my desire to convince you that they are of only secondary importance. An Arabian proverb gives us the proper idea most simply and emphatically: "He who has HEALTH has hope, and he who has hope has everything."

We scarcely realize that our bodies are made up of various functioning organs until one of these organs func-

tions improperly or not at all. We cannot think of the stomach as being at all particular about what is poured into it or of how full it is packed until that stomach refuses to be maltreated any longer, and we find ourselves very much aware that we not only possess a stomach but a very sensitive one.

Even if parents have broken every rule of health themselves and failed in protecting themselves from certain diseases, if my first sentence is correct, they will plan a different life for their children. Because of this it is essential that parents receive help in training their children from early infancy how

to lead healthy lives. Many books are written to help the busy mother correctly care for her child, but the child specialist is her best adviser. The child is an individual, not a machine, and no book can possibly be specific enough to cover all the necessary points. Your doctor may advise you to read certain books and pamphlets; and he wants you to be sure that what you read is of real value when put into practice.

As with all growing things, either plants or animals, it is in the early stage we have the greatest mortality. Parents should realize that if their children survive early childhood, they have a fair chance of continuing to manhood or womanhood. Contagious diseases of childhood are much more apt to be fatal in the first five years of life than in the later years. Do you as parents consider this when you pick up your baby and rush away to visit with a sick neighbor? You do not know what disease is in this home, yet in you go and your own children with you. Possibly you spend the entire afternoon.

In the first place really intelligent mothers try in every way to keep their young children from being exposed to any contagious disease. Secondly, they will protect their children by vaccination or immunization wherever possible. Many have the erroneous idea that school is the place to have all this work done. In reality it is the last resort. Any wide awake health department will try to inform all mothers that their babies should be given toxoid when they are six months old. This will protect 95% of them from diphtheria. The up to date general practitioner and pediatrician will emphasize the need of this protection being given these babies. Why ever take a chance when there is certain protection? Law demands that you have brakes on your automobile and specified type of lights and that you travel no faster than a certain rate of speed, all this with the

idea of preventing accidents and loss of life. A law to try to save babies by preventing them from having diphtheria was voted down in our last Legislature.

There are some parents who are unfortunately indifferent to this form of protection. There are others who have been misguided into thinking harm will be done rather than good. Still another group are the procrastinators that put it off from day to day until alas too late! The suffering, the anxiety, the expense of illness, the little grave on the hillside; all could have easily been avoided. Mothers and fathers don't fail your babies.

At the same time you are preventing your child from having diphtheria you may be saving him from another much dread disease of childhood. An authentic report coming from the Illinois State Health Department says that the danger of children contracting infantile paralysis seems to be less when these children have been immunized against diphtheria.

When your child is two years old have him vaccinated for smallpox. No need to wait until he is entering school. He may be given the typhoid vaccine at any time your physician thinks best. Also talk to your doctor about the scarlet fever toxin which has been used rather extensively in some of the northern states. The tuberculin skin test—called the Mantoux test—should be used to determine if your child has a tuberculous infection. The childhood type of tuberculosis cannot be diagnosed by chest examination. A negative skin test will relieve your anxiety. A positive one should set the machinery operating necessary to determine whether your child has tuberculous disease.

From the contagious disease standpoint parents can protect their children, especially in infancy and early childhood, by keeping them at home, away from all crowds and any known

diseases. Will they of their own free will, because of a desire to save their babies, have them immunized or vaccinated against these diseases? A law which will help us to remember to protect our children should be welcomed rather than rejected.

We read much about the yearly health examination. We think "what a grand idea." We forget to carry it out. Your child should not wait until he is eligible for the pre-school clinics to have his examinations. You should insist that your own doctor give him a careful examination not less than once a year, even though he seems to you to be a well child. When he arrives at school at the age of six he should be ready physically to undertake his tasks.

The health officer, school physician, school nurse and interested teacher want to aid you in keeping him well. The school is not the ideal place to have him immunized against diphtheria or vaccinated for smallpox. It is not the place to discover badly diseased tonsils which have existed in that child's throat for several years and have already done permanent damage to the valves of the heart. It is not the place to determine the child's nutritional status and determine whether he is gaining or losing weight. All these things should have been done before school age. The school house, however, is the last resort. It takes the child at six years of age and does the best it can.

Pre-school clinics have been organized to try to help you get your child ready for school in the fall. To try to do in three months what should have been done for these children over a period of nearly six years. Do you fall your children here? Comparatively few of you take advantage of these pre-school clinics and your child enters school not immunized against diphtheria, not vaccinated for smallpox,

never having had a thorough physical examination and with a mouth full of decayed teeth.

He has to adjust himself to a completely new environment. Physical handicaps frequently cause loss of time from school and inability to adapt himself to new surroundings. This results at the end of the term in retardation instead of promotion. He is a repeater. This may mean such disgrace that he brands himself as a failure, as mentally inferior to his classmates. Let me illustrate my point. Charles, a fine well nourished alert boy of six enters school in September. He is keen on going to school. You, his parents, are justly proud of such a child. Physically and mentally he is perfectly normal. His progress in school is very satisfactory. In November he has a sore throat. A diphtheria placard is seen on your house. Inside Charles lies critically ill. His life is saved but his heart is so damaged that the doctor says "no more school for Charles this term." This perfect specimen of childhood has become a damaged one. The following September Charles, still in the first grade makes another start towards his education. Can this be the boy of a year ago? He is undernourished and pale; he seems tired and listless. By February another placard is on your house. Charles has scarlet fever. Another term of school is lost and Charles has become so discouraged he refuses to attend school again. With much continued persuasion you finally induce him to go. His entire attitude is so changed he has become a different child. A child discouraged and indifferent to an education is the result. He realizes he is over age for his grade. His friends and playmates are two grades ahead of him. Already he is classified as a repeater and a repeater he continues, due to physical handicaps which later become mental as Charles' discouragement makes him

stop trying. Can you afford to have your child take this attitude because of your neglect?

The school physician and the school nurse take up the work. Your child needs certain medical and dental attention. A slip of paper notifies you of this need. Later the nurse calls and talks to you about it. Nothing is done. Four years later your boy is not permitted to play on the school basket ball team because of a heart condition caused undoubtedly by diseased tonsils of which you were informed many times during these four years. Have you failed your child?

Surely educating and clothing your children, sending them to Sunday School and seeing that they select proper playmates is not enough. The child's health must come first. See that all the organs of his body are sound and that his mode of life is such as to keep them so. Give him a well balanced diet, with regular meals and plenty of time to eat. Have meal time a joyful time, with no quarreling or matters of discipline brought up. The child is very sensitive to the atmosphere of the home. He will absorb your anxieties and fears more than you

realize, and mental health is more necessary even than physical. Practice emotional control and interparental harmony.

Let me sum up my main points.

Institute in your home a proper health regime from early infancy for your child. Your guide should be your doctor. Make the atmosphere of the home, by your own habits and emotional control, such that the child is not irritated or over-stimulated. Look upon early immunization or vaccination as imperative. See that your child has a complete physical examination at least each year followed by proper attention to any defects.

Our pre-school clinics in May, 1935, revealed that:

89% of the children were not vaccinated for smallpox.

69% had not been immunized against diphtheria.

84% had some physical defect.

Parents don't fail your children. It has been said "ignorant mother love has probably slain as many babies as disease." Intelligent mother love can save our babies and make them mentally and physically fit for lives of usefulness.

Need for Education In This Field

IN the recent epidemic of infantile paralysis, or poliomyelitis, the officials of the State Board of Health have learned a good many things. Some fundamental scientific facts were re-emphasized and stressed anew, and some old fakes which have been operating for many years took on new life. Out of it all one thing seems clear, and that is the need for better scientific education in the high schools of the State on such matters of every-day importance as the prevention and the spread of disease, also the great need

for a better informed public and a more discriminating one when it comes to appraising the value of the thousand and one remedies, offered for the most part by people who are totally ignorant of the diseases for which they have cock-sure cures.

For the entertainment as well as information of the readers of the HEALTH BULLETIN, we herewith set forth briefly some of the cure-alls urged upon the State Board of Health by people of this State and in many other states. It must be understood clearly that the

officials of the State Board of Health nor the physicians anywhere can afford to laugh too loud and too long at these fakers when they offer "sure cures" for infantile paralysis, because we know so little about it ourselves. We do, however, know enough to know that there can possibly be no merit in ninety-nine out of a hundred suggestions offered for the prevention and the cure of this disease.

We were bombarded by telephone, telegraph, and by mail, as well as by personal calls at the office. First day that the newspapers carried reports that an epidemic of poliomyelitis might be possible and that it might assume alarming proportions before it was over with, a man came to the office for the purpose of bringing a pamphlet in order to show the officials here at the Board the fact that eating food cooked in aluminum utensils was the cause of it all. Thus the homeopaths and people interested in selling other kinds of cooking utensils have tightened their belts and opened a war on aluminum cooking utensils anew.

A fellow from Washington, D. C., writes in on the letterhead of a grease company, with a purported capital stock of one hundred thousand dollars, to assure us that all of this trouble could be prevented if every baby born was bathed every day from birth until ten years of age in oil. He did not say "boil" them in oil, but it was assumed, of course, that the particular kind sold by his company would be the proper oil to use.

Another concern writes in from Philadelphia that the only way to treat this disease is by "combining colors." The head of the concern there signs his name, which is an unpronounceable one, and adds the following titles after it: M.D., M.E., D.C., Ph.D., LL.D., to which imposing list of titles a California doctor some years ago suggested that B.V.D. should be added. This

man, of course, has been shown up by the American Medical Association several years ago as being an unmitigated faker.

One good, honest soul down in Edgecombe County writes in that he is sure that the whole thing is caused by using self-rising flour. This writer further states that everybody's health would improve, in his opinion, if people would quit using self-rising flour and do their own mixing.

A jeweler away down in South Florida wrote in that the sure cure, as he proved in his own case, was a mixture of black pepper, witch hazel, and ammonia.

Another good, honest friend from Wilmington wrote in to suggest that everyone should keep "vaseline grease" up his nose all the time. He stated, "The germs cannot pass it."

A woman in Alabama not only sends in her suggestions as to sure cures, preventives, and so on, but she sends a liberal supply of samples of the ointment which she sells. Not only will her ointment, she says, cure infantile paralysis, but it will cure diphtheria, pneumonia, as well as tuberculosis. Her ointment, she says, also will cure snake bites, running sores, and milk legs. In addition, it is claimed to knock out convulsions, no matter what the cause, and, to cap the climax, put on twice a day, it cures corns. Of course, such an ointment was too valuable to remain in North Carolina, and so we sent it back to Alabama.

A man in Georgia, who puts M.D. after his name, was one of the early ones to write in and suggest that he has "cured" one hundred and fifty patients by the use of a combination of minerals suspended in alcohol and injected hypodermically into the muscles of the patients.

Finally, just as soon as the newspapers began to publish the names and

addresses of these victims, for the most part small children, there was a great stirring among the chiropractors in this section. One Raleigh man was right on the ground, well in advance of any of the patent medicine cure-alls. He had his circular all ready to mail to the patient, with his name and address and his telephone number—all very properly printed in, along with symptoms and a big black headline over a paragraph describing "the cause of infantile paralysis." It is all down there for the gullible reader to see for himself. Nothing is said, however, about the fact that the cause of infantile paralysis is not definitely known. Some of the foremost scientists in the world have been doing their best to dis-

cover the cause for many years. Up to now it has not been done. It is hardly necessary to add that in this very learned circular from this Raleigh D. C., the cause is attributed to a "twist of the spinal column."

We are publishing the foregoing in the hope that those who lay down the curricula to be taught in the public schools of North Carolina in the future will have more respect for genuine science, and teach the children while they are young to disregard advice through channels so freely given at all times by people who know little about what they are talking about, and who generally have something to sell for the sole benefit of the seller.

A Successful Negro Cripple

By ATWOOD CONNOR, Windsor, N. C.

THE accomplishments of invalids are in most cases insignificant. But an ambitious invalid may accomplish worth-while projects. The usual failing of those who are physically handicapped is they lack the confidence in themselves to try something worth while. To inspire other cripples I am going to tell you about a colored man that I know personally.

Starkey Eason is sixty-five years old, and for forty-six years he has not walked a step except with crutches. As a child he was weak, and a great part of his childhood was spent in bed; and at the age of nineteen he was confined to his bed with rheumatism, and for about two months was in great pain. As the pain left him, he became paralyzed from the shoulder down. For fourteen months he lay upon his back, until his muscles became strong and hard enough to hold up his weight, so that he could go on crutches.

When he was taken to bed in the spring of 1889, he could not read very well, but to pass away the time he took to studying. Finally, by the time he was able to go on crutches, he was able to pass the teachers' examination and obtain a first grade certificate, and for twenty years he was one of the best colored teachers of Bertie County. During this time he saved enough money from his salary to buy a farm and build a home.

While he was teaching, he learned enough about woodwork to become a successful cabinet maker. When he built his home, he did all the work himself. Today he has a comfortable house and a good farm. His farm has supported him to the extent that he is one of the few colored men of Bertie County that did not need any help from the Government during the late depression.

In the past "hard times" the colored people of Bertie could not bury their

dead. Eason at once saw what they needed and organized a burial society that buried a number of people, and after paying all expenses it has twelve hundred dollars in the treasury. Under Eason's management, all the money was made without any outside donation. He is looked upon by his race as a leader. They come to him for advice and he gives the best he has.

He has studied until he is a good

scholar in science, history, and mathematics.

I asked him if he thought he would have been as great success if he had had the use of his legs. He said: "I think I would have been a greater man because I have the ambition. But I do not believe I would have been as great thinker because being handicapped physically often stimulates one's mind."

Survey in the Canton, North Carolina Schools

SUPT. A. J. Hutchins, head of the Canton Schools, three years ago made a small survey "to determine the relation between physical defects and disease and failure of children in the grade schools," to use the Superintendent's own language. Last spring another and more thorough survey was made for the same purpose. The survey this time was in co-operation with Dr. C. N. Sisk, district health officer for that district, which includes Haywood County. Mr. Hutchins, at the conclusion of the survey, made a complete report to Doctor Sisk. We herewith present a synopsis of his survey. Mr. Hutchins says in his letter:

"As was true three years ago, this survey shows conclusively that a large per cent of those who fail in grade schools fail for reasons not their fault. At least 50 per cent of all failures could be averted if children were given proper health attention. Assuming that 40 per cent of failures are attributable to physical defects and disease, the cost to the State is about \$6,120 per year for this district. A smaller amount of money would have removed the defects or prevented the disease.

"This does not take into effect the economy of the child's life. Assuming that his first year of employment after leaving school will be on the basis of \$40 per month, the boys alone have lost through delay in finishing school, and, therefore, delayed time of employment, \$72,440 per year. Assuming that only half of the girls are employed at a salary of \$30 per month after leaving

school, there is an additional economic loss of \$27,620 because of physical defects and disease, making a total of \$100,060.

"This, further, does not take into account the personal pleasure and efficiency of the individual.

"My figures do not take into account the further years of loss resulting from failure to give proper health attention to the children."

The survey that Mr. Hutchins carried on really covered three full years. His first tabulation was made three years ago. In this completed tabulation Mr. Hutchins stated that they listed as organic troubles such things as eye, ear, tonsil, teeth, and adenoid troubles, and classed as periodic whooping cough, measles, mumps, scarlet fever, diphtheria, influenza, colds, etc.

There was a total enrollment in the Canton district of 2,382. The results of the examination made in this district resulted in the following findings:

"One hundred and ninety-one children suffered from eye defects, 40 ear trouble, 383 had tonsils, 312 decayed teeth. A large number of children lost time during the year on account of measles, mumps, scarlet fever, diphtheria, and respiratory diseases.

"Two hundred and seventy-one failed on only one subject, while the others, 561, failed on more than one. Greatly to be deplored is the fact that 69 first grade children six years of age were entered and withdrawn before they completed their grade. Two bad habits may result, failure habit and that of

irregular attendance. Ninety - three children had insufficient books and materials with which to work, some of these coming from homes able to purchase books. One father refused to purchase a single book, but kept his first grade boy supplied with cigarettes. Of those failing, 53 were known dissipaters, 59 consistent loafers at hours when they should have been at home, 122 were absent more than justified, and 147 could have finished the grade within nine months. Ten children were mentally below par and twenty-one had no excuse at all."

It is significant to note that in the opinion of this experienced school superintendent that only ten children were mentally below normal.

"A significant fact—proper medical attention at the right time might have saved most of these children one or more years failure, and would have prevented a mental attitude that accepts defeat or failure as unavoidable. Eye, ear, teeth, tonsil, and adenoid defects could have been removed. Medical science can prevent whooping cough or lessen its effects in most cases. Scarlet fever can be prevented from too great ravages, and diphtheria can be prevented. Even flu and colds can be greatly lessened in effect by attention at the right time.

"Of note, too, is the fact that more than five hundred children had more than one disease or defect, and some had as many as ten. Through no fault

of his own, the child was defeated before he started.

"We grease the old car regularly, check the water daily, watch the oil hourly, and hurry to the garage if it is missing on one cylinder or if it develops some mechanical defect, yet we allow the child to run along with numerous defects as damaging to his physical mechanism as running the car without attention to the car. The car must be hitting on all cylinders and mechanically correct, while the child may be missing on three cylinders and headed toward physical wreck.

"Let us give our physical mechanic, the family physician, an opportunity to keep our bodies running properly instead of waiting until disease has made a wreck and then call the doctor to act as salvage man."

It is to be hoped that this year an additional number of schools in this State, particularly in the industrial and strictly rural sections, will follow out the Canton idea and make an accurate survey, getting physicians who are competent to make diagnoses to act as examiners so that the State may have before it by the time another Legislature meets exact information of this character so that the educational committee in the next House and Senate may act intelligently on such pressing problems if they want to.

Health is the Child's Best Insurance

IN an excellent editorial in the July number of the *Agricultural Review*,

Mr. William H. Richardson has put in few words so many important and fundamental principles concerning public health work in general that we are quoting below a few paragraphs:

Mr. Richardson says in the beginning of his editorial: "Health is man's greatest asset, the child's best insurance."

The editorial is an argument for care and protection of children during the outbreak of poliomyelitis, or infant-

tile paralysis, which we hope reached its peak in July.

The editorial called attention to the readiness with which the Commissioner of Agriculture agreed to cancel all of the large gatherings generally held by that department in various sections of the State in June, July, and August, as a measure of safety, regardless of cost or inconvenience. This spirit of co-operation on the part of another State department is fully appreciated by the State Board of Health.

Following are the paragraphs which we pass along:

"In the fight for the health of the generation which shortly will develop into maturity, it will be necessary for some to forego pleasures of various sorts—such as the giving up of long-anticipated trips, attending gatherings of various kinds, and other forms of amusement.

"What is a day's pleasure compared with the life and well-being of any normal American child? Nothing should enter in to deter the fight on infantile

paralysis! It's all poppycock to paramount pleasure over health. At best, it is a short-sighted policy, bordering on criminality.

"There is no need for North Carolina to get excited. The thing for our people to do is to hold their nerve, put up a game fight, and if necessary, forego some of the pleasures of life that the children may have a chance. We believe the farmers are doing and will continue to do this."

A Fair Chance For Our Beginners

By MARY S. BATCHELOR

IT is September; throughout the land school house doors are swinging open to admit an army of six-year-olds, beginners at the business of learning. They come on eager feet, buoyed up by dreams of future greatness and bristling with a sense of their own importance. Their dreams may prove to be, in reality, only dreams, but they are emphatically right in the assumption that they are important. For they are important. Upon their small shoulders, all too soon, we will shift burdens that have grown too heavy for ours. We will bequeath to them the problems which have proved too intricate for our own brains to solve.

We have high hopes for our army of beginners (this strange army, which, like no other on earth, numbers among its recruits a goodly portion of the physically unfit—the modern counterpart of the lame, the halt, and the blind.) We expect them to do great things. We provide for them good schools and good teachers. It is well that we should; yet, we fail to comprehend that no child can give his whole attention to his studies if he is sick, if he has headaches, backaches, toothaches, and the like, if his tonsils are diseased, his teeth decayed, his

eyesight poor, his body undernourished. We fail to consider that, because of physical defects, lessons may fall on deaf ears and that the brilliantly colored pages of learning may appear dull indeed to a child whose eyesight is defective. There are so many lessons which they must learn, but how useless it is to cram a tiny brain with knowledge when the undernourished body beneath may be scarcely competent to worry along with living without adding the extra strain of learning. Yet learn they must.

We are prone to depend too much upon the words that we hear so often, "an equal chance for all." It is time for us to realize that while the schools are open to black, white, yellow, and brown, the Irish, the French, the Italians, and the Poles, the physically defective have far from an equal chance. It is time for us to see to it that each child who enters school is as free from physical defects as it is possible to make him.

It is a much better plan to have the physical condition of a beginner carefully checked before he starts to school. There is more time during the summer months to have corrections made. After the child enters school he will be busy with lessons during school

hours and he will need some time in which to play. He will have little opportunity for visits to the physician and the dentist. However, if he needs medical or dental attention, and has not had it before the opening of schools, he should not be allowed to struggle along because of the fact that his days are very full and an interruption in his studies might cause him to fall behind. You can be sure that the time lost in correcting physical defects is small compared with the time lost because of such defects. It is unfortunate, but nevertheless true, that minor defects which are allowed to continue sometimes result in permanent impairment. While many of them may be corrected easily if they are detected in the early stages, there are many

which may cripple a child for life if they are neglected.

One of the principal lessons which the beginners must learn is that of fair play. They learn it quickly enough. Soon the six-year-old, who was yesterday only "mother's baby," asserts in his staggering, new-found independence, "So and so's no good. He doesn't play fair." A terrible stigma, that of not playing fair, and one to shun. If we are to proudly claim as our birthright "an equal chance for all," then we must play fair by making the words really true; in addition to providing good schools, open to all, by seeing that every child who enters school is free from remediable defects and able to compete on an equal footing with his classmates.

"He Cried and Cried, But —"

IN the opinion of this veteran health officer and amateur editor the editorial quoted below from the *Smithfield Herald* is one of the best of the year. It is a fine little news note on practical preventive medicine as well as a sound lecture on psychology and philosophy. If all parents and teachers were as wise as the little girl, the record of many a student in school and later in life would be much better.

"The typhoid clinic was in progress. Ye editor had occasion to visit the clinic which was being held in the commissioners' room of the courthouse, and as we neared the building, shrieks issued from the upstairs windows as though something awful was being done to some youthful recalcitrant. The shrieks continued as we mounted the stairs and it was not until we were well within the room that we saw the tiny little fellow with such lusty lungs.

"And then our attention shifted to the little boy's sister, just a half a head taller, who in a single sentence expressed the situation. With an ex-

planatory attitude she exclaimed, 'He cried and cried, but it wasn't any use,' and she was really disappointed that the weeping and wailing had been of no avail.

"The little girl had doubtless seen the weeping stunt tried upon a hard-hearted parent who relented when the screams became severe enough. But the stunt had failed with the vaccinating doctor. The little boy's sleeve had been rolled up, the splash of iodine administered, and the needle with its shot was poised in the air. The boy's screams grew louder but the doctor did not seem to hear his cries. The dose was administered. For once the boy's psychology had failed him. His feelings were outraged and he continued to yell. In a short time, however, his sobs subsided—another philosophical conclusion. The thing was done and there was no further use of crying about it.

"Adults are only little boys grown up. They howl over unpleasant things that arise, but when the inevitable unpleasantness is faced and is over, they look up and smile again—the only obvious thing to do."

Milk Laws and Typhoid Fever

A few days ago news dispatches from Rome, in far-away Italy, appeared in many American newspapers describing a recent epidemic of typhoid fever in that city. The epidemic appeared in the middle of June, and up to the time of the reported dispatches, about August 1, 4,011 people had had the disease, and 133 of them had died.

According to the Italian authorities this epidemic was caused by contamination of milk. They have in that city what is called a Milk Producers Board. The Roman courts have ascertained that some of the members of this board accepted bribes from establishments retailing milk and let such retailers sell milk which had not been produced under the sanitary regulations and standards governing the production and sale of milk in that city. The dispatches stated that many of the members of the board have been arrested and charged with willful negligence. As an indication of the seriousness of their offense, in the opinion of the Italian authorities, bail has been refused them, and they are in jail awaiting trial in the courts.

Very recently in the State of North Carolina in two separate counties, one case in Harnett County and one in Bertie County, milk producers have been arrested for violating the milk ordinances in those counties. The ordinances have been established for the protection of the people who buy and consume the milk. In the Harnett County case a man who had been promiscuously selling milk for several years from a small herd was arrested for failing to comply with the law requiring certain equipment and methods of production, devised solely for the prevention of the contamination of the milk with such germs as

typhoid bacilli. This man is a farmer and engaged in the very commendable practice of adding to his income by the sale of such products. Unless such a man is willing, however, to comply with the regulations which science and experience has demonstrated to be necessary, he should not be allowed to sell his product and endanger the lives of people who buy and drink it. The Harnett County man was acquitted in the Recorder's Court, although it was proved that he had clearly violated the law. This was a monstrous miscarriage of justice, and sooner or later, if allowed to stand, will jeopardize the lives of every person in his section who consumes his product. In the case of the Bertie man who was arrested for violating the same kind of ordinance, he was very properly convicted at the first trial, but took an appeal to the higher courts.

Milk is one of the most necessary and essential foods in the dietary of the people in any country at any time. People in North Carolina do not consume as much of it as they ought to do. More of it ought to be consumed daily, but literally hundreds of people in the State have refused to drink milk on the sole ground that it is dangerous from the standpoint of infection. To overcome such a feeling, and to aid in the production and consumption of milk, as well as to lower the case incidence and death record from such diseases as typhoid, the State Board of Health has devised and put in operation wherever possible restrictions which would aid the safe producers and also encourage the increased consumption of milk.

There should be no dallying with the law requiring clean and safe production of milk, and the people should not tolerate any official anywhere who fails to uphold the validity of these laws.



The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

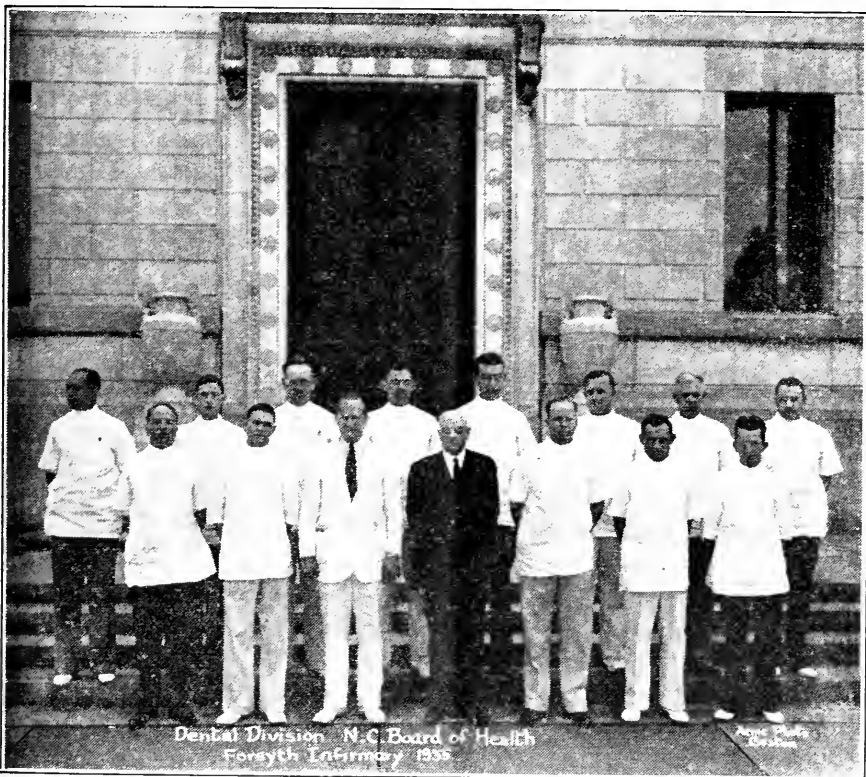
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OCTOBER, 1935

No. 10



Dental Division N.C. Board of Health
Forsyth Infirmary 1935

Agnes M. Smith
Boston

North Carolina State School Dentists Doing Post-Graduate Work at Forsyth
Dental Infirmary for Children, Boston, Mass.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
Diphtheria	Malaria	Typhoid Fever
Don't Spit Placards	Measles	Typhoid Placards
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Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough
	Sanitary Privies	

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters)	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months;
Minimum Standards of Prenatal Care	19 months to 2 years
Breast Feeding	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years
Infant Care. The Prevention of Infantile Diarrhea	Instructions for North Carolina Midwives
Table of Heights and Weights	

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Public Health Dentistry

WHY NOT? We have preventive medicine as a distinct specialty in the medical profession. It is true that a great deal of the work of a medical officer of health, as our British friends call him, is concerned with administrative duties; but the greater part of his work, if it is to be effective, must be devoted to health education. In what field then, may we ask, has health education always been more needed than in the specialty of mouth hygiene? Just as the work of the medical health officer is intimately related to the private practice of medicine and each must merge into the other at innumerable places, so the work of a public health dentist must coordinate closely with the private dentist. There will always of necessity be a sharp enough line of demarkation between the work of the private physician and dentist and that of the public health physician and dentist to assure distinction and dignity for both fields of labor.

For the past seventeen years the North Carolina State Board of Health has recognized fully the important place the profession and practice of dentistry holds in our public health program. It has also realized with equal clarity that the work is essentially educational. So, the emphasis has been placed where it belongs, viz.: In work with expectant mothers, pre-school children and in the public schools.

Beginning in 1918 a group of competent young dentists were employed for their whole time and paid entirely by the State Board of Health. They were properly equipped and sent out to teach mouth health by precept and example. From that first day, July 10, 1918, there has never been a day when the work was not going on in at least a half dozen sections of the State at once. During these years at least two million of young school children have sat in the simple folding chairs of the "State Dentist" and received an examination and the urge to care for his or her teeth through life as one of their priceless possessions.

In the past year a number of well-known dentists, teachers, school officials and health officers have prepared for publication in many of the papers throughout the State their opinion of the need for this kind of work and the success with which it has been conducted. The symposium is such a valuable contribution to the public health literature of the year that we are slightly enlarging this issue of the HEALTH BULLETIN in order to publish at one time all of the special articles. We are doing this particularly so that the teachers may require their pupils to make a special study of each one of these excellent articles in their work this fall.

Notes and Comment

IN our August issue, under the above heading, we made an editorial statement criticising the radio for advertising patent medicines. Mr. Edney Ridge of Station WBIG of Greensboro, "owned and operated by the North Carolina Broadcasting Company," has challenged our editorial as being "unfair, uninformed and unjust." Further, he has demanded that we "publish a correction of your article, or at least facts; and place the blame where it belongs."

We take pleasure in hastening to say that we did not have in mind any particular radio station.

What seems to have so aroused the ire of Mr. Ridge was our comparison to newspaper advertising. We did not think it necessary to explain that we referred to the Federal law, enacted some twenty or thirty years ago, forbidding newspapers to publish paid advertising in the guise of news or editorial matter without being so designated. We have criticised the newspapers often for "patent medicine" advertising and shall continue to do so. But the advertisements are printed as advertisements and not on their front page as news.

By "dirty" patent medicines we meant the two great classes of killers; viz., the pain relievers, most of them heart-depressant drugs; and the laxative or purgative drugs. By "honored place" we meant, of course, the evening hours.

Advertisements of the two above classes of drugs surely come to us over our radio nearly every evening, accompanied by musical programs carrying great emotional appeal; and no word of warning that if the listener has appendicitis which is causing his pain a dose of the "Natural" and "Magical" crystals that moment being advertised, may cause a ruptured appendix and death.

Judging from Mr. Ridge's protests, we assume that Radio Station WBIG of Greensboro has not in the past and does not now broadcast any advertising of headache remedies or laxatives, sugar-coated with good music; and so we herewith extend to Mr. Ridge and his company an apology for any hurt he might have felt as a result of our editorial.

In behalf of our friend Mr. Richard H. Mason, Manager of Station WPTF, Raleigh, we take pleasure in publishing the fact that he showed us a letter, under date of August 29th, in which he turned down a large and lucrative contract from a group of five large and wealthy patent medicine concerns. We commend Mr. Mason's action in the highest terms.

It is not amiss to state here that the radio has no more passionate fan than we are. Owing to progressive deafness for several years we were denied the joy of good music. The radio has brought back that world and opened up a new one. Hence our criticism is that of a jealous friend.

For more than six years we have either prepared or obtained from other members of our staff a weekly radio broadcast, delivered over Station WPTF in Raleigh, copies of which have been sent to the following stations at their request: Charlotte, Winston-Salem, Gastonia, and Durham. We appreciate the courtesies which have always been extended to us by the above named stations and we shall continue our co-operation with them to the best of our ability.

Finally, let us repeat once again, our criticism in the August HEALTH BULLETIN was not intended for any particular radio station.

(Signed) GEO. M. COOPER, *Editor*
The Health Bulletin.

Conservation and Development of Child Health

By CARL V. REYNOLDS, M.D., *State Health Officer*

ALTHOUGH I have been State Health Officer for only a short time, I am well acquainted with the mouth health program as conducted by the State Board of Health, due to the fact that before I became Health Officer I was officially associated with the State Board of Health.

It has been said that the North Carolina State Board of Health has the outstanding mouth health program in the United States. This is indeed a compliment and stimulates us to press forward. However, this could not be true were it not for the loyal support and cooperation of organized dentistry in the State. When we think of what organized dentistry has done for public health in the State and the way it has stood by the State Board of Health every time it needed assistance, we cannot help but take our hats off to the dental profession.

The mouth health program conducted in the public schools of the State on the 20th and 22d of February, 1934, by organized dentistry was unusual and unique in that the dentists of the State closed their offices and gave their time on these two days to making an inspection of school children's mouths without any financial remuneration whatsoever. I am quoting an interview relative to this survey given to the press by Dr. James M. Parrott, former State Health Officer:

"The dental profession had an unusual opportunity to discover undernourishment, as it is now agreed by every branch of the medical profession that undernourishment of the child is reflected in the teeth, among the first places; improperly calcified enamel of

the teeth is one of the surest signs of undernourishment, and an unclean mouth and a mouth with decaying teeth and gumboils means a sick child.



DR. CARL V. REYNOLDS

These facts are evidence of the great importance of mouth health teaching in every public health program.

"I wish to congratulate organized dentistry in North Carolina upon this thorough organization and unstinted support of public health and the splendid manner in which the mouth health survey has been carried on. The Old North State is under lasting obligation to the dental profession for this unselfish dedication to humanity. The magnitude of this activity on the part of the dentists (700 men in the schools at the same time, doing the same thing in a public health endeavor) is something never heard of before in this

State or any other. I wish to express to them the sincere appreciation of the State Board of Health."

I wish to pay my respects to these gentlemen here and now, and also to say that the splendid success of this mouth health survey could not have been possible were it not for the co-operation of the school people of the State, all the way from the State

Superintendent of Public Instruction, the Executive Secretary of the State School Commission, Superintendents of the schools, principals, and teachers.

However, we wish it to be definitely understood that the correction of physical defects of the child is the parents' problem and that the State Board of Health's responsibility is the teaching of prevention.

Health Education

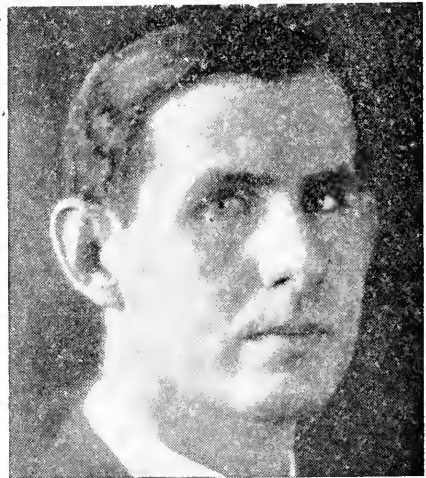
By CLYDE A. ERWIN, *State Superintendent Public Instruction
North Carolina Department of Education*

A HEALTHY body is recognized as the essential by which the individual effects proper and satisfying adjustments necessary to making a happy and successful living. Happy living is not possible without healthful living. In order, therefore, to attain happy and healthful living a program of health education has been included in the course of study for the benefit of the children who are the future citizens of the State.

This course in health education is one of the basal subjects taught in the public elementary schools of the State. It is the purpose of this course to give the child such information about health as will assist him in protecting and improving not only his own health but also that of others in that both the individual and community life of the future will be healthier. It aims to promote and organize the sum total of all experiences concerning health in such a way that beneficial and lasting results will be established in both the physical and mental lives of the children.

The State Board of Health has co-operated with the schools in a very practical way in giving health instruction to school children. Each year in cooperation with the county health authorities a physical examination of

the children who enter school for the first time is made. Through the Division of Oral Hygiene, mouth examinations are made and corrective



CLYDE A. ERWIN

measures are recommended for those children who have had teeth that need attention. That Division also gives valuable information concerning the proper foods and health habits for school children looking toward the prevention of physical defects. I am informed that 39,350 children were given dental corrections consisting of tooth extractions, fillings, and other dental

services during the school year 1934-35. As a result of the examinations made by the Board of Health officials many other corrections were made by the family dentist of the child.

I am heartily in sympathy with the work done among the school children in this respect by the State Board of Health. I am convinced that the corrective measures made and recommended by this Board are having much to do in the improvement of teaching situations within the classrooms. Many boys and girls who were classed as backward before such corrective measures were effected have been known to be excellent students after certain defects in their physical makeup were corrected.

It is particularly important that these corrections in the physical makeup of the child be made when he is young, when nature can aid most in the change, and while his mental makeup is still in the formative stage. If a child enters school with a physical handicap, his mind is often unable to grasp the lessons which are presented to him day by day. Oftentime a poor start in school on account of a physical defect may cause such a child to

be classed as backward. On the other hand, a physical defect remedied in its early stages removes handicaps which may prove serious to the child, sometimes even changing his whole outlook on life.

From personal observation I have noticed remarkable improvement not only in the physical welfare of those children attending the clinics held by the Division of Oral Hygiene, but also I have observed rapid improvement in the academic progress of such children. The principals of my schools have often remarked to me that there has been a noticeable improvement in classroom efficiency as a result of these clinics.

Perhaps the most far-reaching effect of the corrective work done in this connection is in the safeguarding of the future health of these children and in assuring them of an opportunity to grow into strong well-developed adults, fitted healthfully to enjoy successful living. I wish to go on record, therefore, as favoring the continuance of this service in the schools, and I hope that it may be extended as rapidly and as frequently as possible to all the school children of the State.

How I May Know When I Have Selected a Good Dentist

By J. N. JOHNSON, D.D.S., *Dental Member, N. C. State Board of Health*

MY membership on the Board of the State Board of Health has given me an unusual opportunity to have the question "How may I know when I have selected a good dentist?" asked me a number of times.

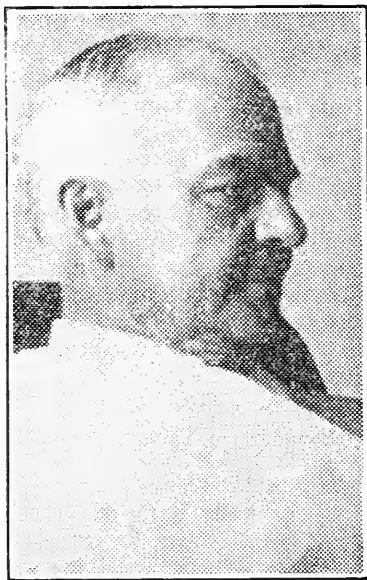
This is an important question and has been and is bothering a great many people in this State and nation. However, it is the welfare and the health of the people of North Carolina that we are interested in at this particular time.

The State Board of Health of North Carolina is doing a splendid piece of public health work and the Division of Oral Hygiene is carrying on an unusual mouth health education program. It can be truthfully said that this program is making thousands upon thousands of our people "tooth conscious" and "health minded." Numbers of these people are learning more about the relation of an unclean mouth to systemic disease than they have ever known before. Mouth health is being

taught in the public schools, the colleges, the Parent-Teacher Associations, and civic clubs. With this newer knowledge the public is demanding an adequate service—adequate not only in supply but an intellectual service as well.

With all this going on in the State and in the minds of the people, you and I are not surprised that this legitimate question is asked. There are several ways by which you may be reasonably assured that you have selected a good dentist. Among these are: a good dentist is recommended by his patients; his office will be clean and the approach to his office will be clean; his office will be tidy and this includes comfortable furniture; his equipment will be adequate; however, it will not necessarily be too elaborate. The old saying of "clothes do not make the man, but help him to look like a man," applies here also; he will be pleasing in manner, clean in person, a kindly disposed gentleman with the interest of his patient at heart, and this interest will be manifested by his sympathetic manner; he will conserve the patient's time as well as his own; his fees will be in keeping with the class of service he is rendering, at the same time considering the ability of the patient to pay. In other words, when all is said and done and the

whole thing is summed up, there is something within you that causes you to approve or disapprove your dentist within a few minutes after you



DR. J. N. JOHNSON

have visited his office. This latter approval is one of the surest signs for you to depend on. Without it you cannot have utmost confidence in your dentist and confidence is absolutely necessary.

Mouth Health Teaching Revolutionizes Dentistry in Wake County

By DR. J. MARTIN FLEMING, *Dental Member, Wake County Board of Health*

SOME writer has said that "comparisons are odious," and the phrase has been often quoted, especially where a steady improvement has not been accomplished nor the old ratio of progress maintained. But when you compare the rapid improvement in mouth health conditions in Wake County with conditions some years ago

you immediately see that comparisons are not odious, but rather that they become a matter of pride and a cause of congratulation.

My boyhood, more than fifty years ago, was an average boyhood of the country boy of that time. I knew nothing of dentists nor of dentistry. The fact is, I doubt if I knew there was

such a profession as dentistry. My first knowledge of teeth even was when an aching six-year molar literally drove me to a physician to have the tooth extracted. It was a rough experience, the memory of which will continue to linger with me, but I was told that I should see a dentist; that, probably, was my first knowledge that there was such a profession.

My home was in Wake County, a county supposed to be an average county, of average intelligence, and this experience was not different from that of other children of that same day and generation. Can you imagine such ignorance in any child of today, even in remote sections of the State, not to mention the counties more centrally located! And what has caused this change?

The awakening has been almost wholly the result of mouth health teaching in the schools. For some years Wake County has maintained a whole-time school dentist. He has worked faithfully and well, and, together with the work of the State Board of Health, it has now become almost impossible to find any child in the county who has not been told something of mouth health and the general care of the teeth.

From gross ignorance of tooth problems the children have become "tooth wise," if I may use that expression, and have talked teeth so much at home that their parents are becoming "tooth prudent." No truer word was ever said than that "A little child shall lead them." Not only have they been led in a general way, but the actual conditions in each individual child's mouth have been brought to their attention.

This does not necessarily mean that all parents have taken advantage of this knowledge. Some will always neglect the most urgent needs of a child—vaccination against smallpox, typhoid vaccine, diphtheria antitoxin.

They will take a chance. We will probably have such parents as these with us always, but they are not in the majority. Numbers are taking advantage of all health information given



DR. J. MARTIN FLEMING

them and thanking those who give it. They know that neglect leaves its permanent mark not only in the mouth of the child, but on its general health.

Probably in no line of health work has so much progress been made, nor with such far-reaching results, as in mouth health teaching in Wake County. And the beauty of it is we are just beginning a realization of its ultimate results. It is something you cannot measure with ordinary comparisons.

The health of future generations is bettered by the health of this generation, and the next by the next, in an ever-increasing ratio of improvement. It is difficult to tell what another fifty years of mouth health progress will do for this county. We have no reason to think there will be any step backward,

while an equal pace forward would carry us a long way towards the approach of a preventive rather than a curative practice of dentistry.

You may say that is an Utopian dream, but it is a worthy one, and we should use our best endeavors to make such a dream the program of our lives.

Parents and Teachers Co-operate With the State Board of Health

By MRS. J. BUREN SIDBURY, *Chairman, Summer Round-Up Campaign, N. C. Congress of Parents and Teachers*

THE health of the child has been one of the major interests of the Parent-Teacher Associations of the State. Parents and teachers agree on the vital necessity of having children physically and mentally fit before good school work can be expected.

We are stressing through our Summer Round-Up Campaign the importance of having every remediable defect corrected before the child enters school for the first time. This Summer Round-Up Campaign was inaugurated by the National Congress of Parents and Teachers in 1925, as their major health activity. From a very small beginning we now have thousands of children examined each spring, and remediable defects—teeth, tonsils, eyes, ears, posture, etc.—are brought to the attention of the parents. These defects materially retard a child's progress in school.

We are endeavoring, through education of the parent, to stress the truth that these physical defects must be remedied. We are also urging the medical and dental professions to give due consideration to the defects of the school child. Even though they be slight at the time of examination and inspection, we are urging that they not treat these defects with indifference, but that they give them serious consideration and co-operate in every possible way with the parents, with the school officials and with the health officials. If we will work together for

the physical health of the child, he will make greater mental progress. To accomplish this we must have more



MRS. J. BUREN SIDBURY

and better co-operation, not only from the parents, but from the teachers, and from the medical and dental professions. It is true that the State Board of Health is rendering a splendid service in its health programs in the counties and its mouth health programs in the schools, but they could do more and render a better service if the public had the proper understanding of

the work they are endeavoring to do and would give unstinted co-operation in season and out. We ask of the associations throughout the State that they lend every possible aid in improving the health condition of our children. We would suggest that at least

two or three health plays, in which the children take part, be included in their Parent-Teacher programs during the school year. This will afford an unusual opportunity for health truths to sink deep in these young minds and bear much fruit in their lives.

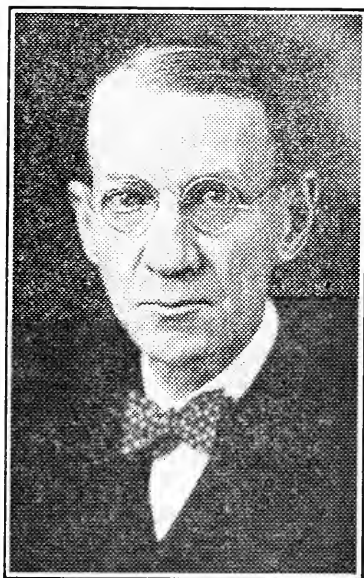
N. C. Dental Society Endorses Mouth Health Teaching

By L. M. EDWARDS, D.D.S., *President, North Carolina Dental Society*

AS one interested in the need and value of dental health education in this State, it gives me pleasure to say that the North Carolina Dental Society has given its approval and support to the North Carolina State Board of Health in its mouth health education work in the schools of North Carolina since the inception of the activity under the direction of Dr. G. M. Cooper, a physician connected with the State Board of Health, who directed the program in the schools for a period of about eight years. Dr. Cooper laid a firm foundation for this work and it has not been necessary to change the structure of the program during these years.

The purpose of the program is one of mouth health education and this is what the State Board of Health has been doing. It has stimulated an interest in dentistry on the part of the laity that could not have been done otherwise. A natural sequence to this demonstration is that more people are having necessary dental work done than they have heretofore. The good derived from this educational program is that the public health is improved, but greater still is the preventive side of the work. Thousands and thousands of children are being taught to eat proper foods, to keep their mouths clean, and to visit their dentist for inspection rather than for correction.

This being true, we are having more children come to the offices of dentists who do not require dental attention



DR. L. M. EDWARDS

than has ever been known. However, we find that in this good State of ours there are still more than half the children enrolled in our schools who have yet to visit the dentist for their first time.

With this knowledge in mind, we realize that the good work of mouth health education which is being so well

done by the State Board of Health is still in its infancy, and we, as dentists, are glad to offer them every encouragement, assistance, and aid in forwarding this great work and we bid them Godspeed in the undertaking. If we

can have this educational work continued by the State Board of Health, and the dentists will co-operate with each other and the people in solving our dental problems, there will be no excuse for panel or state dentistry.

Our Present Mouth Health Program In North Carolina

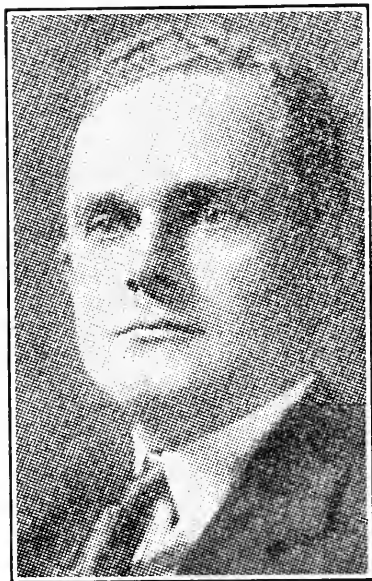
By PAUL JONES, D.D.S., *Chairman, Executive Committee, N. C. Dental Society*

IT is most gratifying to know that North Carolina is greatly interested and awake to the necessity of a mouth health program, especially among the children of our State. A few years back only the most alarming evidence of disease invasion was ever called to the attention of our government. In fact, those in authority were more attentive to the problems of agriculture such as hog cholera, cattle tuberculosis, and tick fever. Even now our farmers are ordered to destroy the farrowed hogs and turn under crops, showing the changing viewpoints under different stresses.

But miracles never cease, and the dawning of a new thought takes hold; today the health of the human animal is predominant. His bodily predisposition to disease and deterioration is of so much concern to our State government that today North Carolina has on the statute books laws insuring the rehabilitation of diseased bodies and the proper observance of hygiene, and our commonwealth is recognized as a most enthusiastic exponent of health for its citizens.

The indifference to oral health is still more noticeable than its observance or correction. Teeth, in the days past, were considered a gift from the Creator, like the fingers and toes, and like these should give no more trouble. In fact the digital organs were more fortunate and, consequently, healthier

because of being seen. (Pride is a driving monster.) Sometimes the fingers and toes came into contact with



DR. PAUL JONES

soap and water; not so the teeth. Hidden from public display, they chopped and ground the material to sustain the body. With their duty done, the cleaning of the teeth was deferred to that more convenient time which never appears, and the mouth's arch enemy, fermentation, commenced its destructive work.

This, basically, with the attending evidences, was the cause of the beginning of mouth hygiene and health as we know it today. Persistently and effectually the sponsors of this health movement have labored for recognition. Our statesmen had to be educated in the belief that childhood was the beginning of manhood and womanhood, and that their health had to be considered before that of cattle, swine, and horses. Co-operation with the ones seeking a mouth health program for our children was a demand not to be denied—a utilitarian as well as an altruistic service. We are greatly indebted to those in our medical society and our dental society for this vision that seized and held them during the formative period of this movement which is now so well grounded and sponsored through our government. Often I have wondered if our intelligent citizens, as well as our State government, fully realize the debt owing the two professions of medicine and dentistry in their sustained efforts through all these years to make our

people health conscious as well as healthy.

It is with much pride that I mention the present fulfillment of these aspirations in the operation of our mouth health program. Through the Dental Division of the State Board of Health Dr. Branch and his staff of dentists have done a noble and glorious piece of work solely in the interest of the health of our people. They have emphasized the need of mouth care among our school children, and they have carried the story of healthy teeth in healthy mouths in a telling and most effective way, so much so that we in private practice can note the improvement in the mouths of our young school boy and girl patients.

I am heartily in accord with the dentistry program as directed by Dr. Branch for North Carolina, and should like to see the activities of this department enlarged rather than any part of them delegated to inexperienced local units. I would like to see North Carolina the healthiest State in the Union and its people possess the best-treated teeth in the world.

Correlation of Mouth Health With Everyday Teaching

By MRS. RUTH HEILIG McQUAGE, *Principal, John S. Henderson School,
Salisbury, N. C.*

SINCE a child must be healthy to learn, we have found from experience that the oral hygiene programs conducted by the State Board of Health have been of decided assistance in solving the problem of the development of the child in our schools. Dental work in the schools, as supplied by the State Board of Health, in co-operation with local county and city authorities, has enabled many a child to remove a physical handicap that otherwise would have been prolonged

on account of lack of money in the individual homes. The task has been not only to do a thorough job of mouth cleaning, but also to instill oral hygiene into the youthful child by actual demonstration. The teacher, while this subject was habitually stressed, could not solve the problem alone.

Dentists in the public schools have been able to visualize to the child the things the teacher sought to impress, such as teaching food values, proper health habits, and the necessity of a clean mouth.

Children, as well as parents, have listened to the dentist, since he has a medical background from which to speak with authority, and the result has been that the teacher has been able to correlate this information with all the subjects taught to the child through the elementary school. The natural result has been a continued emphasis on health in all of the work taught which tends naturally to produce on the part of children a more wholesome attitude both towards study and their classmates.

It has not been so many years ago that it was impossible for parents of limited means to have this portion of the health of their children handled through the schools. Many children were thus denied treatment of a condition which grew progressively worse and handicapped both the teacher and community. The splendid widespread work which has been done through the State Board of Health has aided in helping children regain normal health, and has improved the morale of the classroom. At the same time, the thorough work has spread the gospel of good health to other children, and the cost, being divided between the local communities and the State, has been very little per child.

The teaching of oral hygiene in the schools has, consequently, proven to be an effective subject in true education in the schools of the State.

The tribute to the usefulness of this work done by the conscientious group of State dentists under the direction of Dr. Ernest A. Branch is seen not so much by the thousands of grinning



MRS. RUTH HEILIG MCQUAGE

youngsters who are yet unable to appreciate their betterment, but by the fact that in communities where the work has been carried on for several years, school patrons of means and local governing bodies have praised the work and gladly appropriated the small amounts necessary to continue it.

Improved Mouth Health Reflects Monetary Saving To School Budget

By LEROY MARTIN, *Executive Secretary, State School Commission*

IT is natural for the public to believe that the State School Commission is primarily interested in the financial welfare of the schools. The task was given this Commission of taking \$16,000,000 and keeping the schools open for an eight-months term. The

financial welfare of the schools is certainly one of the problems that must be faced by every citizen, and no doubt the Commission is serving a useful purpose in devoting its attention to this phase of the school system. As citizens of the State and as school patrons, the

members of the Commission are, however, greatly interested in the welfare of the teachers and the children. It is generally realized that we have salary conditions existing in the public schools which must be improved; but in giving consideration to this and other matters involving school finances, some thought should be given to the tremendous cost which must in any event be involved in the operation of a State school system and consideration given to a reduction of this cost without reducing efficiency, thus providing for the school dollar to buy more.

One of the great lacks in our school system is the vast number of children who are forced to repeat their grades. Only a small part of this can be charged to inefficient teaching. In the main, we have good teachers. A study of the reports which have been made as a result of school surveys, which show that approximately eighty-five per cent of our school children are suffering from some physical defect, apparently finds the reason. A further look at the details of the report made shows that of those suffering from physical defects a larger percentage is caused by undernourishment than is assigned to any other reason. It is hard to see how this could be true in a great State such as ours where it is possible to produce an abundance of everything needed for a child's physical development. It is pointed out that people make the mistake of thinking that undernourishment means an empty stomach and that this is not always the case, since well-balanced meals mean more than an abundance of any one article. We are also told that next to undernourishment bad teeth and bad tonsils are next in the class of physical defects. It is generally agreed that these three defects go together and that undernourishment, probably, is a greater contributing factor than the other two.

A study of the school attendance figures shows that a large number of our repeaters in school is due to irregular attendance. The poor health of the child must be a substantial contributing factor in the poor attendance.



LEROY MARTIN

Only a small part of the blame for the retarded child who is repeating his grade is due to the indifference of the parent except as that blame is attached to the indifference of the parent in taking steps to provide a more healthful environment in the home and to remedy apparent defects which are in the child. Everyone conversant with the operation of our schools must realize that there is room for great improvement in the health conditions of the children who are in our schools.

The efforts of the State Board of Health to correct and improve health conditions among the school children is to be highly commended. The Mouth Health Education Campaign in the schools, conducted through the Division of Oral Hygiene, and to which the State has made contributions through the State Board of Equalization when

it was in existence, appears to be doing good work. I believe it is shown conclusively that these campaigns have contributed to improve attendance; and as a result, grade repeaters are re-

duced. It certainly seems that this activity might be enlarged and an extension of health work in the public schools all along the line should be undertaken.

Mouth Health and Body Health

By P. P. McCain, M.D., *President, North Carolina Medical Society*

IT is not only true that decayed and abscessed teeth and diseased gums cause various diseases in other parts of the body, but it is also equally true that disease of the teeth and gums results from poor general health, from a neglect of health habits and from improper diet. Mouth health and body health, or mouth disease and body disease, usually go hand in hand.

For many years it has been known that germs grow and multiply in the pockets of decayed teeth and that oftentimes both the germs and the poison from the germs and the decayed food pass into the blood stream through the porous roots of such teeth and are carried to all parts of the body. Also at times abscesses form at the roots of dead teeth which have been filled. Rheumatism, neuritis, lumbago, sciatica, disease of the eye and of the heart, et cetera, are at times caused by germs and poison which get into the body in this way.

It is by no means true, however, that all such diseases are caused by bad teeth and diseased gums. In some quarters teeth have been too ruthlessly extracted. When some of the above mentioned diseases are present all of the possible sources of the trouble should be searched for and the teeth should not be removed unless it is at least reasonably certain that they are responsible for the trouble.

Keeping the teeth and gums clean is very important, but really not as essential in maintaining sound teeth and

healthy gums as taking a proper diet containing not only the necessary food values, but also a sufficient quantity of



DR. P. P. MCCAIN

the proper vitamins and minerals. On account of the extra demands upon them it is especially important for growing children and pregnant women to take the best of care of their teeth possible, to take the proper diet, and to observe proper health habits.

For more detailed information on body health and mouth health consult your physician and dentist, or write to the State Board of Health.

The Value of Mouth Health Education In Rounding Out a Public Health Program

By R. M. BUIE, M.D., *County Health Officer, Guilford County*

HUMANITY has never gone forward in the conquest of disease save in the light of truth. Dental caries, commonly called decay of the teeth, has been called the most prevalent disease of mankind. Prevention of dental caries is, therefore, a most important problem.

No health department is complete without a well-defined mouth health educational program as one of its chief objectives. For such a program to succeed the health department must have the full co-operation and support of the governing bodies, the teachers, parent-teacher associations, and school patrons.

A child cannot be expected to do good school work unless his physical condition is good. No child should be handicapped in his work by any physical defect which it is possible to prevent or correct. There is no part of our health work more important than mouth health. No mouth is healthy that is not clean. We try to teach the children the value of the regular use of the toothbrush.

Many parents do not realize the importance of the child's teeth. Yet by the time the child has started to school he has, or soon will have, his six-year molars, which are the most important teeth in his mouth. It is a sad fact, but they are also the most neglected. We readily see that it is imperative to prevent their loss. Because the child's temporary or baby teeth will be lost many parents think it is not necessary to give them the attention they should. The child's baby teeth are as susceptible to disease as the permanent teeth. They not only cause the child much pain if they are allowed to decay, but

also may cause serious damage to his general health if they abscess. It is important that these sources of infection be removed if the child is to have good health and do his best work in school.



DR. R. M. BUIE

We hope to teach all the children the value of mouth health. If we can do that each year in the schools it will not be long before everyone will realize the importance of the care of the mouth.

For the past five years this county, cooperating with the State Board of Health, has put on a mouth health program in the rural schools. Each year we have forty weeks of dental service in the schools. In this work we have had the very best support of the teachers, Board of Education, parents, and county commissioners.

The program meets the approval of both the physicians and the dentists. The only fault of the program is that we do not have enough funds to do

more of this work. It is impossible to estimate in dollars and cents the amount of good that a well-organized mouth health program does.

Mouth Health Teaching Popularized Public Health In Pitt County

By J. H. COWARD, *County Auditor*

THE effectiveness of a county health department is determined in a large measure by the number of people served in a practical way. They must see the personal benefits to be derived. Not a great per cent of adults are inclined to seek this type of service for themselves. With most of them it is dire necessity or some health problem affecting their children which takes them to their county health department. It is the preference of far too many of them, it seems, that health department activities be confined to children. Even so, this is one of the best mediums through which to disseminate County Health Programs. Benefited children become, in due season, adult boosters. Consequently, mouth health programs, in my opinion, should be one of the principal activities of a county health department.

We take much pride in the fact that the Pitt County Health Department was one of the first established in the State. It has been liberally supported and efficiently operated. We are so well pleased with its work that the appropriation for this year is more than double that of last year. However, not until 1929, when we instituted mouth health programs, as directed by the State Board of Health, did we find a medium through which the masses could see direct results of supporting the County Health Department. In this year, we contracted with the State Board of Health, the county

agreeing to pay a part of the expenses, to send a school dentist to the county for a given number of weeks, this varying with the amount appropriated.



J. H. COWARD

This year we have increased our appropriation to double the amount provided for dental services in 1929.

The school dentist takes mouth health messages to all children attending school, white or colored. With members of the County Board of Commissioners I have visited schools where mouth health programs were in progress, and have seen the school dentist teach health so that children could understand. We have seen him relieve

suffering of children from poor families, some of whom very likely had never before heard of a dentist. We have seen him instill in the minds of children of parents who were able to pay for dental services, but had themselves not been taught the importance of mouth health, the immediate and constant need for periodic visits to the family dentist, as well as the importance of personal care of the teeth. We were particularly impressed as we saw the dentist explain every correction and show to the patient and those looking on why certain corrections were necessary. He was teaching by illustration and these illustrations remain with the children as constant reminders of mouth health. Further, it was conclusive evidence to those officials present (members of the appropriating body) that reports which the school dentist rendered to them told only in part of the good results accomplished.

I believe the service is definitely improving the health conditions by re-

moving diseased teeth, relieving infections, saving the permanent teeth of those children whose parents are unable to pay for dental services; teaching the value of proper foods grown at home; the value of milk, and the value of cleanliness inside and out. Repeaters in school are being reduced, thereby saving the taxpayers many dollars.

Mouth health teaching is popular with the masses in Pitt County. It is demanded by their children. Unusual as it may seem, I have seen several children receiving treatment, each demanding in no uncertain terms that no one else get his turn, and not one of them complained of pain. They will be health-minded men and women tomorrow, and boosters for public health and the County Health Department. There is no better way to build a successful county health department than to make it popular with the masses—there is no better way to make it popular with the masses than through mouth health teaching.

The Dental Approach To The Child

By ERNEST A. BRANCH, D.D.S., *Director Division of Oral Hygiene*

THE main objective of the school dentists who represent the Division of Oral Hygiene of the North Carolina State Board of Health in the public schools of the State is the creating in the mind of the child a clear knowledge of the need for a clean, healthy mouth. This approach to the child accomplishes a great deal more than simply saying to him "You must have this tooth extracted, or this tooth filled." These are far from pleasant suggestions. The child has heard experiences related by his elders of their visits to dentists and these experiences, told in anything but an attractive way,

have caused a wide gap between the child and the dentist until, in some instances, the child has looked upon the dentist with great dread and sometimes with great fear.

Such was the case a few years ago. How different it is now! When the school dentist goes into a schoolroom today he knows child psychology; he knows how to approach the child; he understands the child; and he knows how to teach. I wish all the parents could visit one of our schools in this State where the school dentist is working. I wish the dentists of the State would take time off and avail them-

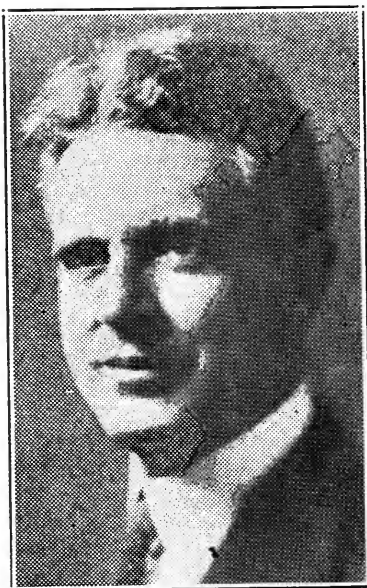
selves of this opportunity and privilege. The school dentist approaches the group of children and talks to them, on their own level, in a most friendly and intimate manner. He clothes his health truths in language which is easily understood and in a manner entirely acceptable to the child. He loves the children; they know it, and they love him in return. What a wonderful situation; what a wonderful opportunity! With this background of preparation, he explains to the child the need of good health. He teaches the child that to have good health he must have a knowledge of and put into practice certain health rules.

The child must eat the right kind of food. He is taught what the right kinds of food are. The value of these foods is related to the child in the most attractive manner possible and in such a way that the child goes home almost demanding of his mother that he have these foods.

He is taught the value of brushing his teeth and the proper way in which to brush them.

He is also taught that if his jaws are to grow normally and develop to a sufficient size to accommodate thirty-two teeth of the permanent set that are to replace the twenty teeth of the first set, his jaws must have exercise. Exercise of the jaw means that they must have lots of work and for the jaw to have work it must have hard foods to chew. Our present day living does not require as much chewing of hard foods as formerly. This is why the dentist today will advocate the chewing of gum. Contrary to the notion of many people, chewing gum does not harm the teeth. It does not kill the appetite of the child, but on the other hand, does furnish a splendid means of exercise for the jaw, and is believed by many to stimulate the appetite.

In this State we found in our survey of last year that 9.3% of the children enrolled in the schools of North Carolina needed orthodontic treatment; that is that 9.3% of the school chil-



DR. ERNEST A. BRANCH

dren's jaws were not sufficiently developed to accommodate their teeth. Therefore, the teeth were irregular or crowded, which means that the child has an unsightly mouth. This, in itself, is sufficient evidence that our jaws need more exercise.

As a parting thought, the dentist teaches the child that if he is to continue to have a clean, healthy mouth, he must visit his dentist at least three times a year, not necessarily for treatment, but for a thorough examination and treatment if treatment is needed.

With this as the objective of the State school dentists, we see that they have a great task before them, as well as a great opportunity. They are measuring up to it in fine fashion.

MR. JNO. G. BEARD,
CHAPEL HILL, N. C.



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NOVEMBER, 1935

No. 11



**CHRISTMAS SEALS FIGHT
TUBERCULOSIS**

BUY THEM AND USE THEM

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly **THE HEALTH BULLETIN**, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
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Chickenpox	Infantile Paralysis	Tuberculosis
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters)	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years
Minimum Standards of Prenatal Care	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years
Breast Feeding	Instructions for North Carolina Midwives
Infant Care, The Prevention of Infantile Diarrhea	
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THE Health Bulletin



PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. 50

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No. 11

Notes and Comment

By THE EDITOR

ONCE again we present our special November issue, devoted for the most part to a consideration of the question of tuberculosis. When Dr. L. B.

McBrayer, who is at present managing director of the North Carolina Tuberculosis Association, joined the staff of the State Board of Health, in 1914, in the capacity of superintendent of the State Sanatorium, at that time under the direction of the State Board of Health, and also in the capacity of director of the State Extension Service in the field of tuberculosis, he requested that one special issue of the HEALTH BULLETIN, either November or December, each year be devoted to the subject of tuberculosis. For the past several years we have devoted the November issue to this subject. One reason is, we like to call attention to the sale of Tuberculosis Seals, which, in recent years, have been so largely used on letters, cards, and Christmas packages so that we may give ample notice to the people that the time has again come to buy these seals. We hope that everybody this year will put aside in their budget for Christmas spending something for Christmas Seals. Full information about the sale and the purpose for the device and what it has meant in recent years may be had by writing to Doctor McBrayer at his office at Southern Pines, North Carolina.

In this issue we present, as usual, on the outside back cover a list of the number of deaths, by county and by race, for the year 1934, caused by tuberculosis of the respiratory system. These figures, published annually, afford the people of the State a concrete view of the progress which has been made during the last twenty-one years in the effort to control and eliminate tuberculosis. We would suggest that our readers compare these figures this month with those published, say, five years ago. In this way the reader can readily see the standing of his or her county as to the progress being made.

The reader will find in this issue a short but very interesting article by Doctor McCain, superintendent of the State Sanatorium, describing the new western North Carolina Sanatorium which was provided for by the last Legislature.

Doctor Foster, health officer of Cumberland County, has a good article on the prevention of tuberculosis from a public health standpoint.

We are quoting from the Sanatorium Sun an article entitled "'Curing' at Home is No Easy Job." We receive many letters at the State Board of Health office from people asking for information which is covered in this article.

One of the most interesting features in this number is the short descriptive article by Mrs. McKay, the county nurse of Catawba County, describing the work that they have accomplished there with underprivileged children in their preventorium for the past summer. An excellent photograph of this group of children is presented along with the article. The most interesting feature of Mrs. McKay's article, of course, is the plans which have been worked out and which they hope to carry through to keep this preventorium open the year round.

We hope our readers will find the issue interesting.

The Western North Carolina Sanatorium for the Treatment of Tuberculosis

By P. P. McCAIN, M.D., *Superintendent State Sanatorium and Director Extension Service*

ONE of the most constructive pieces of legislation passed by the last General Assembly was the enactment of the bill providing for another tuberculosis sanatorium to be located in the western part of the State.

The present sanatorium with its 480 beds is already too large for rendering the most efficient treatment. Also it is too far distant from a large portion of the State's population to make it as available as it should be for diagnostic service and for the visiting of the patients by their relatives. Most patients have to stay in a sanatorium for several months and it is very helpful to them to get to see their relatives at least occasionally.

The present sanatorium is also so swamped with applications for admission that men have to wait about six months and women about three months before they can be admitted. If patients are not situated at home so that they can get bed rest and nourishing food, many of them will get worse while waiting for admission and some of them will get so sick that they cannot be benefited by the time their turn for admission comes.

It is expected that the new sanatorium will provide for approximately 200 patients, and it is hoped when it is put in operation that patients can be admitted to both institutions without delay.

One of the most important functions of a tuberculosis institution is to offer consulting diagnostic services to physicians for their patients who are unable to go to private specialists. Most patients with tuberculosis do not find out that they have the disease until it

has reached the contagious stage and until it is very difficult to get it under control. Early tuberculosis does not make one feel sick. It is easy to cure and it is not contagious. All those who have been exposed to a case of tuberculosis should have a thorough examination, for many of these contacts who feel perfectly well have the disease in the early stage, and, if they are thoroughly examined, they can discover the disease in time to get entirely well.

The General Assembly appropriated \$250,000 for the western sanatorium with the expectation that an equal amount would be available from Federal funds. A beautiful site has been selected between Asheville and Black Mountain by the special site committee appointed by the Governor, consisting of Mr. Kemp D. Battle, of Rocky Mount; Mr. E. B. Webb, of Kinston, and Dr. W. W. Sawyer, of Elizabeth City.

Plans have been prepared providing not only the most modern facilities for the medical care of patients, but also up-to-date operating rooms, since surgery now plays an important role in the treatment of patients who do not respond favorably to the usual medical care. A central heating and power plant, refrigeration and laundry plant, and a dining room, kitchen and bakery are being planned large enough to provide for an eventual capacity of about 400 patients.

Requests have been submitted for a PWA grant to supplement the State appropriation. Senator L. L. Gravelly, the chairman, and other members of our Board have made several trips to Washington and it is fully expected

that a total amount of approximately \$500,000 will be available for the erection and the equipment of the institution.

It is hoped that the contracts for the construction of the institution can be awarded this fall and that the buildings can be completed and made ready for the reception of patients within a year from the time the construction is begun. The architect for the western sanatorium is Mr. W. H. Detrick, of Raleigh, and the engineers are the firm of Wiley and Wilson, of Lynchburg, Va.

The Legislature also provided funds for a surgical unit at our present institution and also for an addition to the Colored Division at Sanatorium. Supplemental PWA grants are being requested for these additions also and it is hoped that a total of \$173,000 will

be available. The architect chosen by our Board for these additions is Mr. E. G. Flannagan, of Henderson.

These additional facilities for the control of tuberculosis in North Carolina will not only result in the relief of suffering and distress, but will also be a splendid financial investment for the State. In 1915, when the State first began to make more liberal appropriations to fight the disease, the death rate per hundred thousand population from tuberculosis in North Carolina was 156.4. In 1933 the death rate was only 64.2. This means a saving of 3,058 lives annually. At the conservative estimate of \$5,000 per life this means an annual saving of \$15,290,000 per year. With these additional facilities there should be a still further saving to the State both in life and property.

The Prevention of Tuberculosis From a Public Health Standpoint

By M. T. FOSTER, M.D., Health Officer, Fayetteville, N. C.

THE war against tuberculosis has been amazingly successful. In 1900 tuberculosis was the leading cause of death, but in 1933 it occupied the fifth place as a cause of death. Statistics from the Metropolitan Life Insurance Company show a decline of 71.2 per cent in the mortality during the thirty-three years which had elapsed.

Because of this gratifying picture, public health workers cannot afford to turn their attention away from tuberculosis. The disease is still a tremendously important public health problem because it remains the chief cause of death in early adult life. It is thoroughly believed that tuberculosis can be reduced to the position of a minor cause of death by the full co-operation of the medical profession, the public health organizations, the social agencies and the general public. This

can only be brought about by public health education.

When writing a paper of this kind, there are certain accepted scientific facts to be merely mentioned. We all agree that tuberculosis is an infectious disease, the organism being the tubercle bacillus. There are two principal sources of human tuberculosis: the primary source is man himself; the secondary source is cattle. The tuberculin testing of dairy herds and the pasteurization of milk has practically eliminated this secondary source. Practically all observers agree that sputum from cases of human tuberculosis is the main source of spread of the disease. Infection takes place usually during childhood, either by ingestion or inhalation of tubercle bacilli. A positive tuberculin test indicates an infection has taken place by the

tubercle bacillus, a negative test rules out the disease.

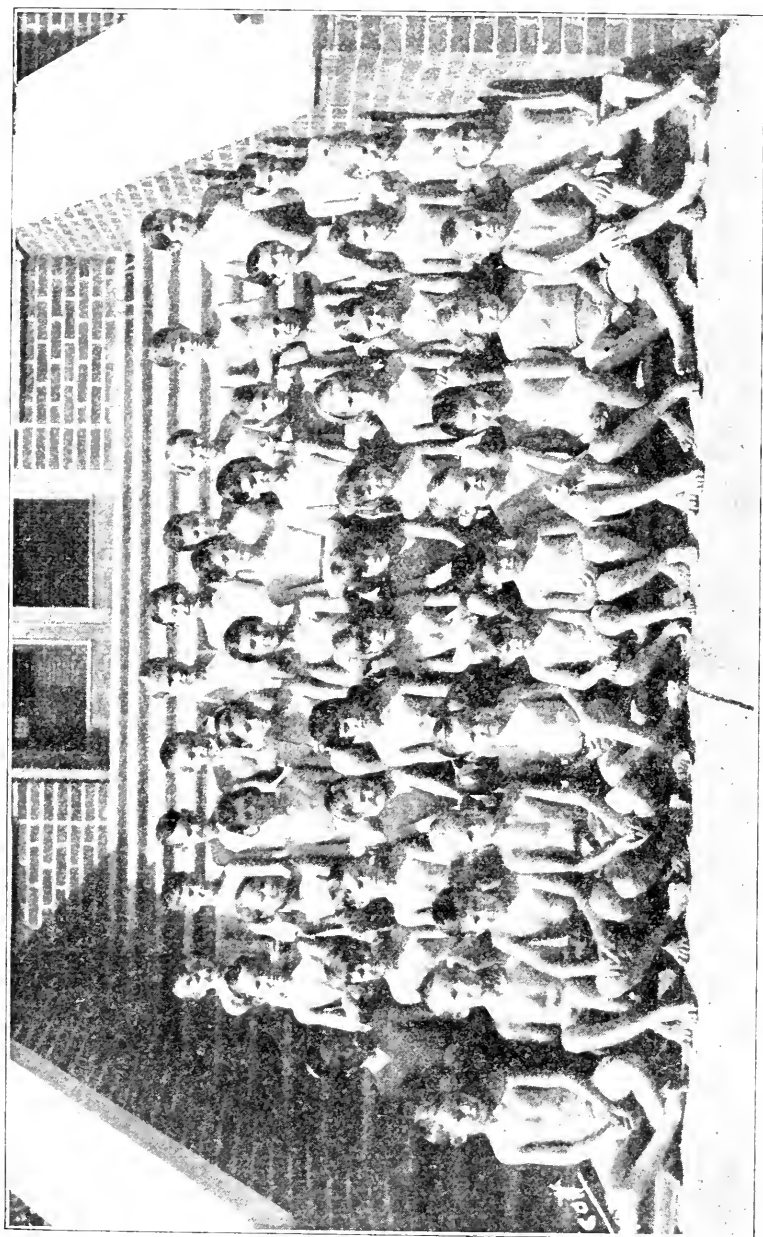
Since we agree that sputum from cases of human tuberculosis is the main source of spread of the disease, we should concentrate our efforts on such cases and their contacts in order to prevent others from having the disease. Case finding, before the patient infects those around him, is not always an easy problem. The laity must be taught to go to their physician regularly, and to seek medical advice early, in order to locate tuberculosis in a curable stage before they have infected others. Cooperation of the physicians must be secured in order to have every case found reported. A free clinic should be conducted in each county several times each year for those who cannot afford private medical care. When a death certificate indicates death from tuberculosis, if this person has not been under the supervision of the health department, a visit should be made to the home and all contacts advised to report to a physician for an examination. The examination of all contacts should include a physical examination and tuberculin test. Those reacting positive to the tuberculin test should be X-rayed. This examination should be repeated every two years until several examinations have been made.

All cases of active tuberculosis found should be placed in a sanatorium if possible. Some counties do not have a sanatorium, and, if the State Sanatorium is not able to admit all cases, some of them must be isolated at home. Infection can easily be prevented in the home if the proper precautions are taken. Isolation of active tuberculosis cases in the home is not advisable if children under twelve years of age are present. When there are children in the home, a mobile tuberculosis cottage can be used to isolate the patient. Such a cottage should be designed for a single bed, no space allowed for visi-

tors or furniture, a table and storage being built in the cottage. The building can be built sufficiently light to be moved to another residence when necessary. The middle third of the side walls can be screened to allow an abundance of fresh air. Sufficient room is allowed between the bed and side wall for the necessary care of the patient. The length of the cottage is that of a single bed. Visitors and children may talk with the patient through the screened side walls without being exposed to the disease in any way. No one should be allowed to enter the cottage except a nurse or an adult member of the family. Awnings should be provided to protect the patient from the sun, and sliding windows to keep out rain and intense cold. The location of the cottage should be such that the patient can easily attract the attention of some member of the household at any time during the day or night.

After the patient is isolated, certain precautions should be observed. All sputum should be collected in fly tight containers and burned. Individual eating utensils should be provided and sterilized after each usage. Equipment such as wash basins, towels, and other necessities should be used only by the patient. All linen should be sterilized before going to the laundry. Each patient should be furnished tuberculosis literature and taught to cover his mouth and nose when coughing or sneezing. The medical treatment of the patient is left entirely in the hands of the family physician. The health department nurse should visit the patient as often as necessary, placing special emphasis on prevention of spread of the disease, and the necessity for frequent examinations by a physician of all tuberculosis contacts, for the purpose of making an early diagnosis of the disease.

All contacts should have preventorium care or extra care in the home in



PHOTOGRAPH OF SOME OF THE CHILDREN OF THE CATAWBA COUNTY
UNDER-PRIVILEGED CHILDREN, NEWTON, NORTH CAROLINA, 1935. PREVENTORIUM FOR UNDER-NOURISHED AND

the form of rest periods, attention to the diet, fresh air, etc. This special care often improves the child's resistance sufficiently to overcome his infection, possibly preventing a tuberculosis breakdown in later life. The correction of physical defects and the giving of hot lunches in school to the malnourished helps to improve the child's resistance.

The care of infectious cases and contacts as outlined can be carried out by a health department of most any size, and would be far reaching in making tuberculosis a minor cause of death. However, larger units can go a great deal farther by offering the tuberculin test to all school children and teachers under their jurisdiction, retesting all negative reactors every three years.

The positive reactors should have a physical examination and X-ray. The physical examination and X-ray should be repeated every two or three years, until several examinations have been made, in order to be sure there is an early diagnosis, should the disease develop. By these examinations, many will be found needing sanatorium or preventorium care. The home of each child with a positive tuberculin test should be visited, tuberculosis literature given, and the source of infection looked for. Every member of the household should be advised to have an annual physical examination.

It is believed that the systematic carrying out of such a program in every county would eventually control tuberculosis and make the disease a minor cause of death.

Catawba County Preventorium for Under-Nourished and Under-Privileged Children

By MRS. ELNORA M. MCKAY, Catawba County School Nurse

FOR several years a preventorium for under-nourished and under-privileged children has been conducted in Catawba County under the general supervision of the school nurse. This health project is sponsored annually by the different civic organizations of Catawba County in co-operation with the Catawba county government. The school nurse, during her work throughout the school year, is charged with the responsibility of locating the children needing treatment, and then, at the end of the year, of selecting those most in need of this treatment and eligible to receive it.

The civic clubs donating funds for this work this year are the Kiwanis, Rotary, Woman's Club, Business and Professional Woman's Club, the American Legion, the Legion Auxiliary, the American Red Cross Local Chapter, and the County Tuberculosis Christmas

Seal Committee—all of Hickory—and the Newton Kiwanis Club.

The camp this year opened on June 10th and closed the summer work on September 10th. The Catawba County Hospital building with equipment is utilized. Its lights, water, and fuel are furnished by the local county government, and the Federal ERA this year paid the salaries of the workers. The working staff consisted of two nurses, two playground directors, one dietician, two cooks, and two janitors.

During the four months of progress 73 children were admitted. Of this number 39 had tonsils removed. Each child was given the tuberculin test, and one, which was positive, was later admitted to the State Sanatorium for treatment. Only 16 out of the 73 needed dental work. And the necessary work was done. Eyeglasses were fitted for 6 of the children. Medical treatment

of varying kinds was given to 20, and all of the children were carefully examined by a physician. The entire group gained 273 pounds, being an average gain per child of 3 and $\frac{3}{4}$ pounds in weight. In addition to a regular balanced meal three times a day, the group consumed 5640 quarts of milk.

Specialists of the county, with facilities provided by a local hospital, did the operative work. Local dentists contributed their work free, and local specialists made corrections for the children needing eye work. Medical treatment was given by the county physician to the rest of them who needed it. The material used in the tuberculin test was furnished by the State Sanatorium.

In the camp now are 40 children. Of this number 21 are from active welfare homes, and 19 are from families of the ERA group. The welfare chil-

dren have either mother dead or father on the chain gang and the mother left unable to work. The present plans are to continue through for one year, if the project is approved in Washington.

A daily planned program which gives the children the proper amounts of well-planned food, rest, and recreation is followed. Each child is given one quart of whole milk each day. The program is planned so as to build up in each child a consciousness of health in its broader meaning. An effort is made to give each child a clear conception of the proper social attitude and to inculcate sound traits of citizenship. It is an inspiration to observe the transformation which takes place in these little ones: their heads are lifted higher, their eyes brighten, their shoulders straighten up, posture is improved, color comes to the pale cheeks, and a smile takes the place of frowns.

“Curing” At Home Is No Easy Job

Although It Can Be Done, It Brings Many Difficulties,
Some of Which Seem Insurmountable — Former
North Carolina Sanatorium Patients Describe
Their Experiences

From the Sanatorium Sun

ONE of the most troublesome questions that vex the tuberculosis patient as he makes his plans to return home after a prolonged sojourn as a Sanatorium resident is this one: “Can I take the cure satisfactorily after I get back home, or am I going to find conditions there such as to make further progress impossible and even undo the progress I have made at the Sanatorium?”

Experiences Vary

Various patients have found varying answers to this question in their own experiences. Some have found it comparatively easy to continue at home the strict routine of rest and regularity which they were taught under the watchful eyes of their doctors and nurses at the Sanatorium. Others have found the task difficult, but have overcome their difficulties—although some-

times only after a stubborn fight against the advice and perhaps ridicule of uninformed and unsympathetic friends and relatives—and made an excellent job of getting well, in spite of all these troubles. Others have encountered such overpowering difficulties involved in “taking the cure” at home that they have found the task largely impossible, with the result in all too many cases that they return to the Sanatorium or to their local doctors for re-examinations only to find out that, instead of progressing, they have grown worse.

Even when home conditions are not particularly unfavorable for “taking the cure,” many ex-patients find themselves facing a difficult problem in the normal human weakness to avoid performing unpleasant tasks unless one has to. At the Sanatorium there is very little choice in the matter. Doctors and nurses see to it that it is easier to obtain proper rest than it is not to do so, insofar as strict enforcement of institutional rules and rigid insistence upon hospital routine contribute to this end. Therefore, the patient has the responsibility shifted from his shoulders to those of members of the staff. At home, however, he finds all this to be different. The responsibility is entirely his. Except for such moral support as he may obtain from the members of his family and others interested in seeing him get well, he alone must swing the whip of wise routine over his head, figuratively speaking, and make himself do those things which he should do out of respect for the condition of his lungs, and avoid those things which tend to slow up, or reverse, progress along the long and often discouraging highway to health.

Why He Had to Come Back

“Three times I left the Sanatorium, and three times I came back,” wrote Spencer M. Smith, well known to North

Carolina Sanatorium patients and ex-patients prior to his death in Albuquerque, New Mexico, a few years ago, in an article in *The Journal of the Outdoor Life* for November, 1931. “My first trip lasted nearly five months; my second was extended to eight months; and my third was of nine months.”

In his *Journal of the Outdoor Life* article, which was appropriately headlined “Why I Had to Come Back,” the author, whose references to sanatorium sojourns had to do with his months as a patient at the North Carolina Sanatorium, went on to discuss the difficulties of taking proper care of one's self after going home, as follows:

“Why I had to come back”—he was on his fourth trip to the North Carolina Sanatorium when he wrote the article—“is no unusual story. Mine is the story of thousands who have been obliged to make return trips to sanatoria.

“It was not the cranking of stubborn Fords or playing football that caused my backsets. It was such little things that I thought could never possibly hurt me. These ‘little things’ sent me back to bed time after time.

“At the Sanatorium everything was arranged for the convenience of such fellows as myself. The doctors and nurses were there to remind me constantly how necessary it was to follow the regular routine of rest and to advise me in case I should develop a slight cold or have any spread of trouble. And, too, there were plenty of sad cases near me to make me understand why I had to be careful. Whenever I would find myself with a cold, or lose a few pounds in weight, or notice a slight rise in temperature, I would report at once and receive medical attention.

Different at Home

“At home it was different. There, when I had a slight cold I prescribed my own medicine rather than go to the trouble and expense of getting a doc-

tor's advice; or I said to myself that the cold would be gone the next day. The next morning I would find that it wasn't any better, but I just knew that, with a little of my own doctoring, it would be gone in a day or two. And so on.

"One night there was a big street dance in town. Dancing was something I knew I should not do, and if anyone had told me that afternoon that dancing a few minutes during the evening would cause me to hemorrhage, I would have laughed at the idea. Me dance? Why, the very idea! Not me. I knew better. But I knew that going and watching the others dance and listening to the music would not hurt me. So I attended the dance as a spectator."

But, the article goes on to say, this young man, who was so resolutely determined not to do anything so unwise, from the point of view of his health, as to dance, was induced to dance "just one time." Deciding that "just one time" would not hurt him, he danced "just one time"—at first. Then he danced several times. And that night he hemorrhaged. And shortly afterward he was back at the Sanatorium.

Says Backbone is Needed

"When you go home what you will need principally is the old backbone," wrote another former patient at the North Carolina Sanatorium, Mrs. Mildred Hardman, in an article published in the September, 1931, issue of *The Journal of the Outdoor Life*. "There are a number of qualities that will come in mighty handy, such as will power, self-control, and common sense, but backbone is just another name for these, and a regular, one-hundred-percent, honest-to-goodness backbone is the thing that will see you through. It must be a good, stiff one, because there will be a lot of strain on it. You will need to use it early and late. It will

have to stand up against you yourself and against your friends and relatives. It will be unpopular. It may make you unpopular. For its sake you may receive such opprobriums as 'over-careful,' 'cranky,' 'lazy.' But stick to the old backbone. It is your friend—your best friend."

After describing a few personal experiences in trying to "take the cure" properly at home, Mrs. Hardman summarized her observations and impressions as follows:

"And so it goes. Fortunate are we if we are blessed with a good, strong backbone. If yours seems a little weak at first, just use it and you will be surprised at the way it will stiffen up. Give it a break, resist a few temptations, and pretty soon you will have a full-grown, well-developed old backbone, a faithful servant you can depend on to serve you well, one that will help you to live a long and happy life—when you go home."

From still another former patient of the North Carolina Sanatorium, also writing in *The Journal of the Outdoor Life*, her article appearing in the issue of February, 1931, one obtains an excellent picture of some of the difficulties of "curing" at home, and particularly vivid is the picture of the troubles of the home "curer" struggling with the problem of visitors. This Tar Heel author, Miss Velva Brittain, discussed such matters as irregular habits of eating and sleeping at home, the problem of remaining contented among well people, the longing for the moral support of fellow-patients (and often unappreciated help in sanatorium "curing"), and other aspects of trying to keep up at home the routine of the Sanatorium. Then she had the following to say regarding visitors:

"They seem to come in droves. Maybe there will be several days and no visitor. All of a sudden, from here and there, will come crowds of them. Sundays are their big days, and getting

one's rest-hour then is as hard as getting every word in every cross-word puzzle that one finds. In a small town where everybody knows everybody else, one can just expect endless visitors—"the butcher, the baker, the candlestick maker" and their whole families! To keep them quiet or to keep them away during two hours in the afternoon would necessitate hiring several policemen. Who can rest when a new family of visitors arrives every hour—or every ten minutes? They don't understand."

Nothing in the above should be regarded as an effort to discourage those who may be obliged to "take the cure" at home. As many writers in *The Journal of the Outdoor Life*, the *Sanatorium Sun*, and other publications frequently point out, it is possible to "take the cure" at home and do so successfully. But it is well for those who look forward to going home as the beginning of an easy and simple phase of recovering their health to face squarely and with wide-open eyes the difficulties that are often present and frequently appear well-nigh inescapable.

A Few Facts About Milk, The Most Nearly Perfect Food

By JOHN ANDREWS

(This presentation is a dialogue between Mr. Andrews, an engineer with the State Board of Health, and Mrs. Parsons. They have just met on the street during the lunch hour, and as the scene opens Mr. Andrews is speaking. It is suitable for a radio broadcast or for a play at school.—EDITOR.)

Andrews: Hello, Mrs. Parsons, I'm certainly glad to see you.

Parsons: I'm glad to see you. I want to ask you a question.

Andrews: Well, I'll do my best to answer it.

Parsons: I just had lunch at the little cafe around the corner, and I noticed something I wanted to ask you about. Incidentally, a small blue and white sign hanging near the cash register said the place was rated as a Grade A cafe by the State Board of Health. But I wanted to ask you about the way they served milk. The waiter brought an empty glass and an unopened half pint bottle of milk, just loosened the bottle cap and then left them on the table. I had to pour the milk into my glass myself. Why didn't they fill my glass in the kitchen and avoid the trouble of carrying the bottle? I suppose there is a good reason, because people usually don't do unnecessary work.

Andrews: There is an excellent reason for serving milk in its original container. But, first did you read the inscription on the bottle cap?

Parsons: Certainly, how could I help it? It said Blanks Brothers Dairy, Grade A Pasteurized Milk.

Andrews: To receive a Grade A rating, a cafe must, among other requirements, serve the highest grade of milk available, which is Grade A Raw or Grade A Pasteurized milk. It is required that milk be served in the original container in order that the customer be given an assurance that he is actually receiving the high quality product to which he is entitled. The fact that you remembered the inscription on the bottle cap is a good illustration of the value of serving milk in the original container.

Parsons: That seems to be a very reasonable requirement. Now I remember that the teachers in school used to say that milk was a good food and all that, but just how good a food is it? Aren't there plenty of other foods just as good?

Andrews: No, Mrs. Parsons, there are no other single foods which are "just as good." Milk is the most nearly perfect food. I sometimes wonder whether we modern, twentieth century people really appreciate the food value of milk as much as did the people of olden days. The Bible describes the

Holy Land as a land "flowing with milk and honey;" dried milk constituted a large portion of the food ration of the soldiers of Genghis Khan, the Mongol monarch who conquered Asia and part of Europe in the thirteenth century; cheese was important in the diet of the Vikings, who sometimes even crossed the Atlantic in their small ships. The cow was an object of religious worship by many primitive peoples. The "Pilgrim Fathers" were not so wise, however. They brought no cattle with them on the Mayflower. The lack of suitable food, especially milk, resulted in a very high death rate, especially among the children. Every child under two years of age died during the first winter, and nearly one-half of all the persons who came on the may flower died that winter. The governor recognized the mistake and later ordered that one cow and two goats be brought over for each six people.

Parsons: I guess milk is a good food, all right, but it seems to me that milk is composed so largely of water that its food value would be much less than that of solid foods, such as peaches or carrots.

Andrews: The fact that milk is a liquid is confusing; it actually contains more solid matter than a good many so-called solid foods. Milk contains about 13% of solids by weight, which is a larger percentage than is contained in peaches, carrots, onions, beets, squash, pineapple, turnips, oysters, cabbage, radishes, cauliflower, spinach, watermelon, pumpkins, tomatoes, asparagus, celery, lettuce or cucumbers.

Parsons: Is that a fact? Well, I certainly did not know that there was so much solid matter in milk. What is the composition of this solid matter? I know that the human diet must be well-balanced.

Andrews: Milk is a well-balanced food. The very fact that milk is the only food prepared by nature for the specific purpose of nourishing the young of mammals is ample proof that it is almost an ideal food. It has been called "the most nearly perfect food." It is rich in protein, the muscle builder; it is rich in lime, the tooth and bone builder. Its large fat and milk sugar content give it a high fuel value. Milk is also a good source of Vitamins A and G. But, probably the most important quality of milk as a food is the fact that it is easily digestible; it is

one of the most digestible of all foods. Of course, milk could not be used as the only food. It does not seem to be an entirely dependable source of the other vitamins, and it does not contain enough iron. Normal children should drink about one quart of milk a day, together with a careful selection of other foods, which should include orange juice, cod-liver oil, and green vegetables.

Parsons: I see now why milk is called the "most nearly perfect food" and I am going to start drinking a lot more myself. It does seem to me, though, that the production and handling of milk should be carried on in the cleanest possible manner, for is it not true that unclean milk can spread disease?

Andrews: Yes, indeed! In addition to being an excellent food for people, milk is a good food for bacteria and certain disease-producing organisms. Unclean milk is unfit for human consumption, and for this reason it is necessary that the production of milk be closely supervised by the health authorities.

Parsons: And, just *how* do the health departments exert this supervision?

Andrews: By urging the various cities, towns, and counties to adopt the Public Health Service Milk Ordinance. This ordinance sets forth minimum requirements for sanitation and cleanliness in the production and handling of milk, and directs the local health officer to enforce these regulations.

Parsons: Roughly, what do these regulations consist of?

Andrews: They require that milk be obtained from healthy cows, be handled only by healthy people in clean equipment and in clean surroundings. The milk must be promptly and efficiently cooled, and properly bottled, and labeled with the grade which is determined by inspections of the dairy and laboratory tests of the milk. That is a general statement of the requirements of the Public Health Service Milk Ordinance. There are, of course, many detailed requirements and certain minimum standards for equipment, construction and methods.

Parsons: I wonder if some of those requirements are not rather stringent. Isn't it rather expensive for the dairy-men to comply with all these regulations?

Andrews: I will answer that question with two statements. First, the Public Health Service Milk Ordinance

is based upon proven facts, and every single requirement can be justified with a sound public health reason. It has been our experience that it is not too stringent and it does not cause the dairymen any unjustified expense. Second, let us assume that a particular requirement is hard on the dairyman, but is vitally important in safeguarding the quality of the milk. Certainly, a public health department would be neglecting its duty if it did not set the health of the large consuming public at a higher value than the inconvenience to the relatively small number of milk producers. Actually, however, we have found the Public Health Service Milk Ordinance to be entirely satisfactory and practical.

Parsons: Well, now, after this ordinance is passed, doesn't it take a long time for the dairies to be gotten in the proper condition? And how do the dairymen feel toward this strict control of the sanitary conditions of milk production?

Andrews: Ordinarily, a period of twelve months is allowed between the passing of the ordinance and the date upon which only graded milk may be sold. Almost without exception, the dairymen feel that control of the sanitary conditions of milk production is beneficial to them. I can illustrate this best by citing the experience of the city of Kinston, North Carolina. Ten months ago the local health department began a vigorous clean-up campaign. At the start of the campaign the Public Health Service rating of the raw milk supply was about 37%.

out of a possible 100%. The eight dairies had a total of 136 violations of the milk ordinance. Today, there are only seven such violations, and the raw milk rating will be more than 95%. That is truly excellent progress in dairy sanitation.

Parsons: Yes it is. That seems to be truly a great piece of work. How did it affect the dairymen? What effect did it have on the consumption of milk in Kinston?

Andrews: I was hoping you would ask that question. The consumption of raw milk has now increased 40% and the consumption of pasteurized milk has increased 150%. It has been our experience that it is definitely advantageous to the dairymen to clean up and produce clean, safe milk, because after they have done so, their sales almost invariably show a large increase.

Parsons: Then it seems to me that when a town adopts and enforces the milk ordinance, the health of the community is benefited in two ways: the quality and safety of the milk supply is immeasurably increased, and the amount of milk consumed is greatly increased. I should think that such work would be of great value to the general health and welfare of the people.

Andrews: We are convinced that it is, so the State Board of Health and the local health units are doing their level best to increase the quality of our milk supplies and to increase the consumption of milk, "the most nearly perfect food."

Book Review

IN A BENGAL JUNGLE. By John Symington, M.D. 245 pages. Chapel Hill: The University of North Carolina Press. Price \$2.00.

It is nothing unusual for a physician to crash into the big league of writers and novelists. But when a physician who is a working health officer in a North Carolina county writes a book as interesting as Dr. Symington's it is big news in this office. The book has 245 pages and not a dull paragraph in it. The University of North Carolina Press has never turned out a more beautiful job. The crayon

drawings by Paul Porterfield are superb.

Dr. Symington has been health officer of Moore County for several years. He came to this State direct from a service of about twenty years as medical officer on tea plantations at the foot of the Himalaya Mountains in India. There in an exhausting climate he fought tropical diseases. He treated patients in huts and palaces. He made many of his calls on elephant back and was exposed to the dangers of attack from wild animals as well as from such diseases as cholera and plague. He

has skillfully set down in simple language many of his experiences, and in doing so he has left an unforgettable impression of the routine daily life of some of India's millions. There is not one word of "shop talk" in the book. Each chapter is a separate story and all are interesting. This reviewer has seldom read any book with keener interest and greater pleasure than this one.

Dr. Symington was born in the Highlands of Scotland and before embarking on his Indian service he spent some years in the Belgian Congo as a medical missionary. He was the first white man in that section of Africa.

You will lay this book down unconsciously wishing that the author had added a few more chapters which you feel would have been easy for him to have done out of the abundance of his experience.

Labor Department Bulletin

MAJOR A. L. Fletcher, Commissioner of the North Carolina Department of Labor, has recently written an excellent pamphlet setting forth the "Rules and Regulations Governing Work Places and Working Conditions."

The publication is complete and full of valuable information. If every employer of labor in mill, store and factory and otherwise would closely follow all the recommendations many lives could be saved and much suffering resulting from preventable accidents could be prevented. Such matters as heating, lighting, methods of escape in case of fire, equipment and location of water closets and all such things are fully discussed.

The requirements for first-aid supplies are simple and adequate, so much so that we pass along to our readers the list of instruments, drugs and dressings to be placed in the first-aid cases. They require all bottles or other containers containing drugs or other substances to be clearly labeled and that the specific purpose for which the contents are to be used must be plainly stated.

"The contents of the first-aid case shall be as follows:

INSTRUMENTS

1 pair scissors
Thumb forceps

Tourniquet

Graduated medicine glass

DRUGS

- 2 oz. aromatic spirits of ammonia
- 2 oz. 4 per cent boric acid
- 2 oz. alcoholic iodine solution, half strength (for external use)
- 2 3-oz. collapsible tubes of bicarbonate of soda mixed with vaseline (3 per cent for burns)
- 2 oz. castor oil (for eye injuries)

DRESSINGS

- 1 doz. assorted sizes sterile gauze bandages
- 1 spool Z. O. adhesive plaster, 1 inch by 5 yards.
- 3 one-half ounce packages of absorbent cotton
- 3 one-yard packages of sterile gauze
- Splints of assorted sizes for fractures
- Wooden applicators wound with cotton
- Wooden tongue depressors."

Nursery Rhyme—1935

Mary had a little cold, but wouldn't stay at home,
And everywhere that Mary went, that cold was sure to roam;
It wandered into Molly's eyes and filled them full of tears.
It jumped from there to Bobby's nose, and thence to Jimmie's ears.
It painted Anna's throat bright red, and swelled poor Jennie's head;
Dora had a fever, and a cough put Jack to bed.
The moral of this little tale is very quickly said—
She could have saved a lot of pain with just one day in bed!

—Arkansas Democrat.

DEATHS FROM TUBERCULOSIS OF THE RESPIRATORY SYSTEM—BY COUNTY AND RACE: 1934

TOTAL DEATHS (TUBERCULOSIS, ALL FORMS), 2,143

COUNTY	BY PLACE OF DEATH			BY PLACE OF USUAL RESIDENCE			COUNTY	BY PLACE OF DEATH			BY PLACE OF USUAL RESIDENCE		
	Total	White	Colored	Total	White	Colored		Total	White	Colored	Total	White	Colored
Total, State	1,937	851	1,086	1,818	763	1,055	Johnston	29	18	11	28	17	11
Alamance	21	11	10	23	12	11	Jones	2	2	2	2	2	2
Alexander	7	5	2	7	5	2	Lee	10	3	7	11	4	7
Alleghany .....	.....	.....	.....	.....	.....	.....	Lenoir	24	10	14	25	10	15
Anson	14	1	13	15	2	13	Lincoln	3	2	1	4	2	2
Ashe	4	4	.....	4	4	.....	McDowell	7	6	1	7	6	1
Avery	4	4	.....	4	4	.....	Macon	10	9	1	11	10	1
Beaufort	10	4	6	11	5	6	Madison	5	5	.....	5	5	.....
Bertie	13	7	6	13	7	6	Martin	17	7	10	17	7	10
Bladen	6	2	4	7	2	5	Mecklenburg	100	37	63	102	39	63
Brunswick	7	.....	7	8	.....	8	Mitchell	2	2	.....	2	2	.....
Buncombe	270	197	73	130	90	40	Montgomery	2	1	1	2	1	1
Burke	22	18	4	23	19	4	Moore	16	4	12	15	3	12
Cabarrus	24	13	11	26	15	11	Nash	37	10	27	34	9	25
Caldwell	6	5	1	7	6	1	New Hanover	27	8	19	29	10	19
Camden	2	.....	2	.....	.....	2	Northampton	15	3	12	15	3	12
Carteret	5	4	1	5	4	1	Onslow	6	3	3	6	3	3
Caswell	10	1	9	12	2	10	Orange	7	3	4	11	3	8
Catawba	16	13	3	16	13	3	Pamlico	2	.....	2	2	.....	2
Chatham	12	2	10	12	2	10	Pasquotank	15	3	12	16	4	12
Cherokee	7	7	.....	7	7	.....	Pender	9	3	6	9	3	6
Chowan	7	1	6	7	1	6	Perquimans	7	1	6	7	1	6
Clay .....	.....	.....	.....	.....	.....	.....	Person	8	2	6	8	2	6
Cleveland	15	6	9	15	6	9	Pitt	40	9	31	43	9	34
Columbus	6	3	3	6	3	3	Polk	2	1	1	2	1	1
Craven	16	4	12	19	4	15	Randolph	11	5	6	13	7	6
Cumberland	28	6	22	30	7	23	Richmond	14	4	10	15	5	10
Currituck	2	1	1	2	1	1	Robeson*	20	1	16	21	2	16
Dare	2	2	.....	2	.....	.....	Rockingham	27	13	14	28	14	14
Davidson	12	8	4	11	7	4	Rowan	20	10	10	21	10	11
Davie	5	3	2	7	4	3	Rutherford	13	6	7	13	6	7
Duplin	8	4	4	9	5	4	Sampson	19	7	12	19	7	12
Durham	69	17	52	59	11	48	Scotland	12	2	10	14	2	12
Edgecombe	46	4	42	47	5	42	Stanly	4	4	.....	4	4	.....
Forsyth	94	36	58	96	36	60	Stokes	7	5	2	7	5	2
Franklin	8	2	6	8	2	6	Surry	25	21	4	26	22	4
Gaston	17	9	8	18	10	8	Swain	2	2	.....	3	3	.....
Gates	9	1	8	9	1	8	Transylvania	3	3	.....	3	3	.....
Graham	1	1	.....	1	1	.....	Tyrrell	7	3	4	7	3	4
Granville	15	7	8	16	8	8	Union	6	3	3	8	4	4
Greene	8	1	7	9	1	8	Vance	22	9	13	22	9	13
Guilford	77	37	40	79	36	43	Wake	61	32	29	67	32	35
Halifax	43	11	32	44	12	32	Warren	12	2	10	12	2	10
Harnett	18	10	8	19	10	9	Washington	7	1	6	7	1	6
Haywood	13	12	1	13	12	1	Watauga	7	7	.....	6	6	.....
Henderson	14	11	3	13	10	3	Wayne	86	5	81	77	5	72
Hertford	18	4	14	19	5	14	Wilkes	9	4	5	9	4	5
Hoke	27	5	22	6	3	3	Wilson	61	20	41	66	24	42
Hyde .....	.....	.....	.....	.....	.....	.....	Yadkin	7	5	2	7	5	2
Iredell	24	12	12	23	11	12	Yancey	4	4	.....	4	4	.....
Jackson	7	7	.....	7	7	.....						

September 23, 1935.

* Three Indian deaths in Robeson.



The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

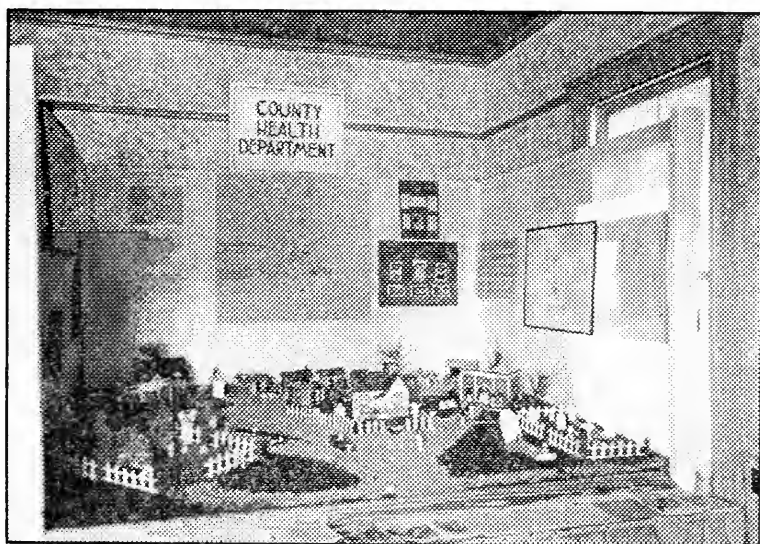
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PRACTICAL HEALTH TEACHING



Richmond County Health Department Booth at Ellerbe Springs
County Fair

One of the most creditable booths at the Richmond County Fair in October was that prepared by the County Health Department under supervision of Dr. B. B. Dalton, county health officer, and the county nurse, Miss McCaskey. Elsewhere in this issue there is a brief descriptive article about this excellent exhibit based on information kindly furnished us by Mr. Isaac S. London, editor of the Rockingham Post-Dispatch, and Dr. Dalton.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly **THE HEALTH BULLETIN**, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Scarlet Fever
Cancer	Health Education	Smallpox
Constipation	Hookworm Disease	Teeth
Chickenpox	Infantile Paralysis	Tuberculosis
Diabetes	Influenza	Tuberculosis Placards
Diphtheria	Malaria	Typhoid Fever
Don't Spit Placards	Measles	Typhoid Placards
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Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough
	Sanitary Privies	

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.

Prenatal Care (by Mrs. Max West)	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters)	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years
Minimum Standards of Prenatal Care	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years
Breast Feeding	Instructions for North Carolina Midwives
Infant Care. The Prevention of Infantile Diarrhea	
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THE Health Bulletin

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Notes and Comment

By THE EDITOR

WITH this issue the HEALTH BULLETIN completes fifty full years of existence. This number is twelve in the series of fifty volumes. The BULLETIN was founded by Dr. Thomas Fanning Wood, the first State Health Officer. It went on a permanent basis fifty years ago. Doctor Wood, as every one will remember, was the first Health Officer. He worked on a part-time basis, and the first appropriation made by the Legislature to the State Board of Health, when it was organized, was one hundred dollars a year. Doctor Wood was a practicing physician in Wilmington at that time. He was the editor of a successful medical journal, which was supported by private enterprise.

Doctor Wood became interested in public health work through his work as a journalist and a practicing physician. He became convinced that much of the suffering and illness prevalent in that day was due to causes which could be easily prevented. As the years went by in the early 70's, Doctor Wood gathered around him a few of like-minded physicians in eastern North Carolina, including the then young physician Dr. Richard H. Lewis. They succeeded in organizing the State Board of Health in 1877. The BULLETIN was established as a medium through which simple information could be passed along to the people of the State which would cause them to think and to act in the promotion of public

health in order that the ravages of preventable disease might be eventually eradicated.

Immediately following Doctor Wood's death in 1892. Dr. Richard H. Lewis succeeded him as State Health Officer. During the ensuing sixteen years that Doctor Lewis served, his office was on a part-time basis, and the total appropriation for all of the work of the Board during his term, which ended in 1909, never exceeded two thousand dollars a year, with the exception of the last two or three years, in which a small appropriation of a few hundred dollars was added to start the State Laboratory of Hygiene.

The present editor of the HEALTH BULLETIN is one year older than the State Board of Health. For the past twenty-one years he has been a staff officer of the State Board of Health, and since March 1, 1923, he has been the responsible editor of the HEALTH BULLETIN. Like Doctor Wood, he became interested in the public health work while going about his duties as a practicing physician. In treating people for typhoid fever, and therefore seeing many untimely deaths from that terrible disease, and in coming in daily contact with the profound ignorance on the part of mothers in the care of infants, with the resulting high mortality among the babies for lack of proper care, the editor became convinced during the early years of his practice that the public health work

of the State should be put on a sound scientific basis and that it should have facilities to reach the people with information which they so gravely needed.

During the years which the editor has been responsible for the HEALTH BULLETIN he has at all times had many other duties to perform. For most of the time the work he has put on the HEALTH BULLETIN has been simply a labor of love in the form of extra work. He has done his best to carry forward the precepts and standards laid down by Doctors Wood and Lewis. He has tried in every issue to present at least some helpful information which would aid people in preventing sickness. This has not always been easy to do. At times he has wearied in his role of adviser. At other times he has been discouraged because the need for such work seemed so great and the visible results have looked so small. Often he has had to write against a "dead line": all newspaper people know what that means. The fact is, this article is being written against a dead line, and it is being written somewhat in the mood that Eugene Ashcraft, editor of the *Monroe Enquirer*, expressed the other day in his personal column. Mr. Ashcraft said that he got out his paper twice a week, more than a hundred issues a year, and as each issue came off the press and went to the post office to be mailed to his subscribers, he had the feeling that never again as long as he lived could he assemble material for another issue which would interest anybody. That paragraph surely went home to this particular editor. For the last one hundred and fifty issues of the HEALTH BULLETIN, covering a period now of nearly thirteen years, the editor has had that feeling every time he has gone to the printer with a new issue.

In this month, at the close of the year, it is a good time to take stock and to take counsel of our readers. The editor would like to have constructive suggestions. Not everything that he

writes or assembles from the pen of other writers can interest everybody or can be helpful to everybody. The editor would like to have suggestions as to what kind of information most of the people need and the kind which would be most helpful to most people. Never mind the brickbats; we get plenty of those, and we are proud to say that we also get our proportionate part of the bouquets.

We are grateful to the many friends during the past few years who have taken the time and trouble to write to us to commend us for some particular article that they liked and which was helpful, or for some particular issue which they thought, on the whole, was good. All of that has been stimulating and encouraging, and, strange to say, we have appreciated some of the knocks. Our early years were influenced by the Biblical doctrine that an individual should beware when all men spoke well of him. That is to say, if everybody praised and nobody blamed, we might be satisfied that we were doing nothing that would interest anybody. However, we do like to get more commendatory expressions than criticisms. That is perfectly human.

Many of our readers have asked us to publish more illustrations. For the last few years we have been unable to do this because the cuts cost considerable and we have not had the money to provide it. Another thing is, we are restricted to sixteen very small pages each month and naturally we can afford but little space in such a small publication for pictures and illustrations, even though they are extremely valuable. One of our friends from Texas two or three years ago suggested that we have our articles shorter and have more of them. That was a practical suggestion, and we have tried to comply as far as possible. Another friend from Florida suggested that we have more information on the prevention of venereal disease. These are

only samples of the kind of suggestions which we would like to have.

As the months and years pile up on us, in the language of some poet, who has well said, "The more we live more brief appear our life's succeeding stages," we are tempted more and more to become weary in well doing and to seek seclusion and rest. From all such moods we always react by thinking of the immense amount of work yet to be done in the field of public health, and though growing old, it seems entirely too fast, the editor's face is still

toward the sunrise, and he is still interested in the many problems in public health remaining to be solved for the benefit of the coming generation.

So, with this closing issue of the year and volume fifty, from the abundance of a full half century of experience, the HEALTH BULLETIN would suggest to all its readers and particularly those of middle-age and past that they take heart and renew their courage and join in making 1936 the happiest and most successful year from the standpoint of health that the State has ever experienced.

The Problem of Old Age

A Sermon by REV. S. L. MORGAN, Creedmoor, N. C.

"THE hoary head is a crown of glory; it shall be found in the way of righteousness." — Prov-
erbs 16:31.

The ancient Wise Man's thought is probably this, that it is a glorious thing to reach the age of the hoary head because it is at the same time an evidence and a reward of righteous living. The hoary head is honorable, because it is proof that one has lived a clean, godly life. It is true in a deeper sense than the Wise Man dreamed. "Righteous" living lengthens the span of life. To obey God's laws, which include the laws of health, is to increase one's prospects of reaching old age and the hoary head.

We will notice four facts about old age:

I. *The universal dread of old age.* Swift said, "Every man desires to live long; but no man would be old." Poets so picture it.

Longfellow:

"The sunshine fails, the shadows
grow more dreary,

And I am near to fall, infirm and
weary."

Scott in Marmion:

"Thus pleasures fade away;
Youth, talents, beauty, thus decay
And leave us dark, forlorn, and
gray."

Gerald Massey:

"Set is the sun of my years;
And over a few poor ashes,
I sit in my darkness and tears."

Instinctively we dread old age, when our powers fail, and the next step must be—death.

Two facts in our present day life add a new dread to old age. One is the speed of industry in our machine age. The worker of 45 dreads to hear the sentence of doom, "You are too slow." And so he shaves to hide the tell-tale gray hairs, for fear of losing his job. The demand for youth, carried to absurd lengths today, brings into business and the professions the fear of losing one's job on the first sign of old age. Often men and women in their prime, when mature wisdom and ripe experience fit them to be their best, are haunted by the fear of losing their jobs because they are too old. I know of a good town church that

passed a resolution not to consider for pastor any man past 45!

It is the fashion to make sport of woman's sensitiveness to her age. To do so is either cruel or else it shows ignorance of a fundamental fact—the other cause for dreading old age today. It is the fact that women are every day face to face with the insecurity of love as age creeps on a woman. They see men tiring of aging wives and falling for pretty young flappers. It makes youth and beauty a life-and-death matter for a woman. What woman values more than life may be lost, unless she keeps in the background the fact that youth and beauty are fading. It is a matter too serious for jesting.

There are solid reasons to fear old age. But the second fact about old age gives the cloud a silver lining.

II. *Old age can be deferred.* The eminent physician, Dr. Arnold Lorand, in his book, "Old Age Deferred," shows convincingly that the average person today can defer old age, preserving youthful vigor, and even youthful good looks, for ten to twenty years. With our modern knowledge of the laws of health, he declares, there is no need to grow old at 40 or 50, or to die at 60 or 70. Of course, as he says, we might have to go back a few generations and build up in our ancestors a more vigorous constitution through observing the laws of health. For parents who have disobeyed these laws are doomed to pass down to their children their own weakened constitutions. The opposite is equally true.

The author gives striking examples of this fact. An Amsterdam physician, who lived to be 94, had six sons whose ages averaged over 100 years. Thomas Parr, of England, was so remarkable for his physical and mental vigor at 152 that he was invited by the king of England to live awhile at the court. Accustomed through his long life to simple living and plain food, he was killed in a few months by the rich foods

furnished by the king. Numerous like instances given by the author make a very strong case. The laws of health are simply God's laws. Sow wild oats, if we will; commit any sort of excess—even in work or worry—and old age begins to creep upon us, and life is shortened by so much. That is God's law, written large in all the ages of human history. Obey the law of health—the law of God—and the result is a longer period of youthful vigor and usefulness, even of youthful grace and beauty and good cheer. To live that sort of life is clearly a Christian duty, when God has revealed the secret. That seems to be the point of the text: "The hoary head is a crown of glory"; it is the reward of obedience to God's laws of health.

These laws today are in the reach of everyone, if not already known. The gist of this great door on deferring old age is this:

Live in the open air and sunshine; eat and drink in moderation, and only what is wholesome, avoiding tobacco and alcohol, and even coffee and tea in excess; work hard with body and mind, stopping short of fatigue and strain; avoid all excesses, physical, mental and emotional; sleep at least seven hours; take a daily bath as a pure health measure; relax at least one day a week and rest; give constant play to kindly feeling, refusing absolutely to let the mind dwell on anything unloving or ugly; actually take time to be friendly, generous, religious.

This author, who is a European, deplores the fact that the average business man in the United States leads the world in reaching a premature old age, abusing himself worse than the worst slave driver ever abused his slaves, wrecking his health by the time he is 40 or 50, and missing all the best of life in the frantic rush of business. His book is an impressive appeal to put off old age 10 to 20 years.

III. *Old age has peculiar dangers.* Young people can begin today to fortify

themselves against these dangers, and so make old age happier when it comes. Some of these dangers are:

1. *The loss of good cheer.* In a recent book, "Old at Forty, Young at Sixty," the author points out that most people, by the time they reach forty, have lost the cheer impulse through neglect. This impulse, if cultivated, will beautify all the relations of life, making life happier for oneself and others. But it can be kept alive only by persistent struggle. Lincoln was named as a striking example of what may be done to combat the tendency to become gloomy and disagreeable. Tragedy's mark of sorrow was ever on his face, but he stoutly refused to be buried under his sorrow. In the presence of any human being his face lighted up with a kindly smile. However burdened his own heart, he would recall a story to bring good cheer to the heart of another.

President Roosevelt is another eminent example of how one may triumph over obstacles and radiate good cheer. One who has studied him closely recalls how at about 39 Mr. Roosevelt lost the use of both legs through infantile paralysis. The future looked gloomy enough, but he resolutely set about finding new interests, and losing sight of himself in doing worth-while things, and his life has been remarkable for its good cheer and optimism. To keep sunshine in the life is one of the main secrets of perennial youth. It will actually add to the length of one's days.

2. *The loss of contact with the present.* Old people, if they don't look out, will live in the past, talk only about the long ago, and be painfully alone in the world. They can prevent it if they will. It is a part of the tragedy of old age that one so easily forgets what goes on today, while he has a vivid memory of events in the distant past. The present rushes by freighted with events great and small, but likely the aged man allows people to say of him,

"He can talk about only things in the long ago." There is no need to cut oneself off from people about us and live in the past. One should persistently find out every day something interesting to talk about in the present. One should read the daily paper enough to be intelligent about at least a thing or two—something so fresh that the past will look drab beside it. One can easily know something new to talk about every day. One must do it, or else be painfully alone.

To live in the past means mental stagnation and decay. One who does not brace the mind to read and to think earnestly will soon become senile, incapable of interesting others. A law of all being is that we must "do or die." We can keep alert to a good old age by earnest mental exercise. Sir William Herschel at 80 was still exploring the heavens and enriching man's knowledge of the universe. John Wesley at 80 was still traveling four to five thousand miles a year behind his horse, reading many great books, keeping his mind vigorous by exercise, preaching twice a day, and living in intimate touch with the present. At 80 Gladstone was still the "grand old man" of England, taking up some new study every three months and keeping abreast of the movements of the world he lived in. One should refuse to be left behind as the world moves on, becoming alone and pitiable.

3. *A third danger is that one will give way to ill temper and intolerance.* One sees customs and conventions change, and everything old either discarded or discounted. To age everything likely seems to be headed toward the devil. Young people seem so different that they appear degenerate. Age is sure of its wisdom, and so becomes critical and cynical toward all that is modern. So we find many old people sour, intolerant, out of humor with people and things all around them. It is to be even disagreeable, unwelcome, shunned; miserable themselves,

they make all others miserable that come near them.

Such a fate can be avoided. The only escape is to keep up with the procession—to live in daily touch with people and ideas as they change—to keep the heart warm and sweet by friendship, and by getting into the joys and sorrows of others and actually finding how to help.

This is primarily a family problem. One or two sensitive, irritable, critical old people will take the joy out of any home. Several provisions against it must be made during the years. A sweetly reasonable family government must hold the respect of the children. The parents must constantly enter into the life of their children, entering old age as their chums and advisers, instead of their critics. As far as possible they must grow with their children, never permitting the separate interests of youth and age to widen into a gulf.

One tells of a mother who always maintained such a relation to her children. After they had children of their own it continued as a delightful comradeship. Children and grandchildren came every Sunday to consult her about their problems. They said, "She was always 'comfortable' to be with when we were children, and now she continues to be 'understanding'." Here is one of the main secrets of a happy old age, to continue a sympathetic chummy relation with one's own children.

4. *Loss of initiative* is a fourth danger of old age. To quit work, to fold the hands, to feel that life is done, is to bring death nearer. "Do or die" is God's law also for old people. Those children are unwittingly cruel who deprive their parents of active employment. Some light work, some means of self-expression, some employment giving all possible play to their own initiative is essential, if old age is to have any joy and the life be prolonged. I have seen old people constantly

watched by well-meaning children, their speech censored, their every move thwarted, and heard them say sadly, "I am so lonely!" To find oneself constantly watched and repressed and thwarted is a torture worse than death and surely hastens death.

On the other hand old people often make themselves impossible by trying to dominate their grown-up, even their married children. This attitude makes the old people unwelcome, even dreaded. If parents must live with their married children, they must resolutely set out to be only guests, never meddling, never criticising, never even advising except in the most delicate, courteous manner. Many marriages are broken up by parents who insist on "butting in" and criticising the behavior or the affairs of their married children.

Here is, in fact, the gravest problem old people ever have to face, to "let go" gracefully, without giving up all initiative and self-direction. It is seldom done without a stubborn battle marked by resentment, if not ugly feeling. It is nature's recoil against the sense of being pushed out and "put on the shelf." It is a battle to the death, and those looking on should show infinite sympathy and patience. One old man, when criticised for his autocratic, violent manner, explained it by saying, "It is the only way I have to show them I am not dead!" To give up seems a certain step toward death. One can hardly take it all at once, nor gracefully. I recall one of the great leaders of our State, whose friendship I enjoyed in his last years. For long years his influence was almost dominating. A new day came, and others came to the front, and he saw himself set aside. For several years he was openly resentful, sometimes ugly. Then he slowly adjusted himself, and his last years reflected all the beauty of the sunset colors.

IV. *We may make the sunset of life glorious.* One need not dread such an

old age as the one just referred to. Each of us can recall a few old people whose last years were as radiant as the sunset, and a joy and inspiration to all that knew them. We can all attain to such an old age, if we will pay the price. It will mean a high resolve to live from now on according to God's laws for body, mind and soul, keeping all in health and harmony; to think only lovely thoughts, seeing that nothing unloving or ugly in our life today shall rise up to haunt us in old age. Above all, we must learn how to walk toward the sunset hand in hand with the Friend who will be closer than a brother, if we come truly to know Him. Reading widely of late on the problem of old age, I was impressed with how generally writers, both sacred and secular, put the emphasis on the power of true religion to make old age glorious.

And truly old age has its compensations. The fiery passions of youth have given place to the freedom and repose of old age. One is no longer in bondage to what others do and say. An elderly woman wrote to Dorothy Dix: "I used to live in dread of old age, but now that it has come, I am having the time of my life. Once I spent my life worrying over ten thousand trifles—dates and parties, how to dress, how I looked, what people said and thought about me, how to keep my husband in love with me—would some pretty young flapper get him from me? All that is gone. People will let an old woman do as she pleases. My husband now is too old for any one else to want him, and I have him all to myself and secure. Old age is glorious."

If old age is glorious, the heart must be kept sweet. All that is unloving must be rooted out, and place given only to what is beautiful and true and good. "Where love is there God is also." The world has no object more pathetic than an old age that is sour and cynical. I once drove for two hours behind a slow horse with an old man. I let him do all the talking. For an hour

he talked unceasingly about the slights and injuries, real or imaginary, he had suffered in his long life. It was painful to hear. At last I said, "Now tell me some of the lovely things people have done for you." He smiled, and said, "There are plenty of that kind too," and for another hour he poured out beautiful incidents of the kindnesses he had received. It was a delightful contrast.

Here is one of the main secrets of life. We grow into what we think. Ugly thoughts will doom us to an old age of misery for ourselves and all that touch us. Lovely thoughts will build a heaven in our hearts and will draw people to us in old age. A recent writer has said that two main things are needed to bring one to a radiant old age: faith in the good God, and ten years of hourly, cheerful thinking, no day without a cheerful act of service, the heart always kept sweet and kind. Living in this spirit each day one may look without fear toward the sunset, feeling with Browning—

"Grow old along with me!

The best is yet to be,

The last of life, for which the first
was made:

Our times are in His hand
Who saith, 'A whole I planned,
Youth shows but half; trust
God: see all nor be afraid'."

Or with Whittier in "Eternal Goodness"—

"I know not what the future hath

Of marvel or surprise,

Assured alone that life and death
His mercy underlies.

And so beside the silent sea

I wait the muffled oar,

No harm from Him can come to me
On ocean or on shore.

I know not where his islands lift

Their fronded palms in air,

I only know I cannot drift

Beyond His love and care."

District Health Work

By C. N. SISK, M. D., Waynesville, N. C.

THE exigency of the times required that North Carolina be divided into 100 counties, varying in area from Chowan with 165 square miles to Robeson with 990 square miles. Industrial development convenient to natural resources has concentrated our population in certain areas of the State, so that we find a variation in county population from Tyrrell with 5,164, to Guilford with 133,101.

Public health administration, which is defined as the science of organizing and operating governmental agencies, whose purpose is to improve the physical well-being of the general population, is becoming to be considered a necessary part of the political machinery of government. A well-rounded program of public health work in an area requires the services of a medical health officer, a nurse, a sanitary inspector, and office clerk, not to mention such important things as a Mouth Health Program, and laboratory service. A budget of approximately \$9,000.00 is required to provide this minimum personnel. For a county with less than 20,000 population, to raise this amount of money would require a tax levy in excess of what the average taxpayer would consider justified for a service too frequently considered to be a luxury. We find 38 of our 100 counties with less than 20,000 population, and several more so near the border line to warrant a statement that one-half of our counties cannot be expected to provide adequate health service within themselves.

The importance of protecting the health and improving the physical well being of the human race does not deserve debate. If public health administration is worthwhile in Greensboro and Guilford County, it is equally important in Tyrrell County and Columbus, although the health problems in

the two counties may not be identical in nature. The work in Tyrrell and numerous other small counties demands the special training of a health officer, nurse, sanitary inspector, etc., just as the population in Guilford and other populous and wealthy counties does. With the limited funds available for financing public health administration, it is obvious many small counties cannot provide a complete health unit, furthermore the small population would not justify the full time of a health officer, and in some instances of a sanitary inspector, and clerk, working wholly in one county. With the object in view of furnishing health service to the entire population on an economical basis, the combination of two or more small counties into a health district appears to be the solution.

Such a district comprising the counties of Haywood, Jackson, and Swain in Western North Carolina, was organized and began operation on April 1, 1934. Appropriations have been renewed for the continuation of this department for the current fiscal year. In reviewing the work of this organization, one is impressed with the economy of distributing administrative cost, the expense of clerical work, and laboratory service, over the larger area. Offices are maintained at the county seat in each county, while the clerical work is done largely at the main office in Waynesville. A bacteriological laboratory is maintained at the Waynesville office, and renders laboratory service for the private physicians throughout the district, as well as for the hospitals, and health workers. Laboratory analysis of milk samples in enforcement of the Standard Milk Ordinance is made for the three counties in the central laboratory, which obviates the necessity of duplicating in each of the counties expensive equip-

ment, and personnel trained for this particular work. The advantage of combined personnel in the event of an epidemic of communicable disease, and for conducting clinics is apparent. We have not experienced an epidemic demanding unusual service, however, we have realized the benefits of having available a larger nursing service in conducting tonsil and adenoid and immunization clinics.

The mutual interest generated between counties by a joint health organization results in closer cooperation, not only of health workers, but this feeling is also reflected to the school organization, farm and home agents, and civic clubs of each county. The combination of counties into a health district gives greater opportunity for staff education and improvement through staff meetings, and by interchange of personnel, also for standardization of methods and pro-

cedure. Although the Haywood-Jackson-Swain District Health Department has operated very smoothly, yet the possibility for complications to arise as a result of combining counties into a district health department is recognized. Sometimes civic pride and prejudice may be encountered, difference in political faith, difference in population and tax values may cause dissention, with the withdrawal of one county from the district, thereby disorganizing the budget. The detached location of personnel may prove a haven for the time chiseler, and also permit the misfit to create unfavorable criticism. The selection of personnel for a health district should be very carefully done to assure the employment of tactful individuals well trained, energetic and imbued with a natural love for their work. Taken as a whole the advantages to be derived by combining small counties in health work greatly outweigh the disadvantages.

Health Exhibit at Richmond County Fair

WE are indebted to Mr. Isaac S. London, editor of the *Rockingham Post-Dispatch*, for some interesting information about the health exhibit put on at the Ellerbe Springs County Fair, held in October. The exhibit was prepared by Dr. B. B. Dalton, County Health Officer, and his assistants. Mr. London has kindly consented for us to use the cut which he had made for use in the *Rockingham Post-Dispatch*. We are presenting this on the front cover. The exhibit was arranged in such a manner that any person could understand the serious lessons it presented. We quote from the *Rockingham Post-Dispatch* as follows:

"A new display at any of our fairs and one of the most enlightening was that of the County Board of Health. On a large sand-table were shown complete homes as examples of right and

wrong methods of sanitation—even fine homes can have disease-breeding surroundings, while more modest ones may meet all the requirements of modern sanitation. These comparisons of homes and their surroundings were eye-openers and so plain everybody could get the lesson at a glance. On the walls maps of the county—one showing the large amount of sanitary improvements made over the county since the first of this year. Another map was a graphic picture of the tuberculosis situation in the county. Active cases were shown by pins of different colors, representing the white and colored races. The pins were rather thick around the more populous sections of the county, but it is significant that in the large sandhill township of Beaver Dam there was not a single one—meaning that that township had had no active case of tuberculosis in the last three years. Syphilis was rated as the county's Public Enemy No. 1."

In addition to the above description, the following further outline is inter-

esting. As will be seen on the front cover picture in the front right corner, is a cemetery with placards showing what each child died of and how it could have been so easily prevented. Other sections had comparative farm houses and yards contrasting the neatly kept premises with sanitary privies as against the ramshackled ancient "back-houses." It was a fine piece of educational work.

In Richmond during the months of June, July, and August the Health Department gave free typhoid preventive treatments to 8,670 different persons, a total of 26,010 separate treatments. This does not include the large number given by the physicians of the county all through the period. Up to July 18 there had been twenty-three cases of typhoid fever with two deaths reported in the county. Not a case has been reported in the county since that date. Vaccinations are given credit for

checking the epidemic, according to Doctor Dalton. He thinks that whether or not that is true, he can offer no other reason for the abrupt termination of cases of the disease in the county.

Doctor Dalton has as assistants an office clerk, one nurse, and a sanitary inspector. From February 1 to August 1 they had as an additional assistant Mrs. Elizabeth H. Tudor, an efficient nurse who was employed through funds provided by the U. S. Public Health Service. The services of Mrs. Tudor had to be terminated in August as a result of the failure of Congress to enact the Deficiency Bill. Since that time Mrs. Tudor has taken the prescribed six weeks course as additional study at Peabody College. It is hoped that the Federal funds will again become available and that she may be restored to her place in the Richmond county organization.

Heart Disease in Persons of Middle Age

By R. T. STIMSON, M.D., Director, Bureau Vital Statistics

THE man or woman who lives the full three score years and ten, has but a short existence. To childhood, life appears long; but when it is passed, it seems only a brief space of time. Even the material things that we see around us, are to last much longer than we.

If life is short, its duties and labors cannot last long. There is much to be done, and the briefer our stay, the more need of earnest action. Life is—in a sense—a crisis, and whatever is done, must be done now. If a man is drowning, or a vessel at sea is in distress, the remedy to be applied must be applied now, or it will be in vain.

The purpose of our modern business man, to "make hay while the sun shines" is shared by men of different occupations. Hurry, drive, and action,

seem to be the compelling forces. In place of a strenuous mood and tensioned nerves, we should substitute peace, gentleness, and understanding; and the higher one rises in the world of activity, the more careful one must be, to bring rest and play into life.

Regardless of what forces are acting to increase or decrease the span of life, it is clearly shown by our records, that the hazards to life and health, have undergone much change since 1900. For the most part, there has been improvement, but in a few respects, the change has been for the worse. In so far as declines have occurred in the death rates from individual causes, these have been gradual, and therefore, have not been very apparent from one year to the next; but as we look back over the years, to the beginning of the twentieth century, it

is very evident that great gains in many conditions, have been achieved.

Preventive medicine has been highly successful in the control of infectious diseases. Tuberculosis is an outstanding example of this, in the record of the past three decades. In 1900, and in fact—as late as 1915, this disease was the leader among man's enemies, in this State.

Today it has fallen to fifth place in the causes of death. In the last thirty odd years, the mortality rate in the United States, has declined by more than 70 per cent. Deaths from diphtheria, are on the way to elimination, if we use more widely, the means of protection that are at our command. Deaths from infantile diarrhea, scarlet fever, and other acute diseases of early infancy, have also been greatly reduced, although not as much as desired or as is possible. Typhoid fever, no longer holds as high standing as a principal cause of death, as it did a few years back. The decline from these diseases is continuing steadily, and will continue—provided the fight to eradicate them is continued.

In his struggle against bacterial disease, man has been eminently successful, but in another field, efforts have been less fruitful. The diseases which have been successfully dealt with, affect—in the main—infants, children, and young adults. With respect to conditions of older ages progress has been difficult, and in some conditions, actual set-backs have been suffered. More attention is being given to the diseases of middle and late life; especially to heart disease and cancer.

Heart disease, today, ranks first in the causes of death. In the last thirty years, the death rate from this cause, in the United States, has doubled. It is true that a part of this increase merely reflects the increasing proportion of older persons in the population, among whom, deaths from heart disease chiefly occur; but a material part of the increase is due to a definite and

a very real rise in heart disease mortality. In 1924, heart disease accounted for 1780 deaths in North Carolina. In 1933, 4500 deaths were charged to this condition; accounting for a rate of 137 per 100,000 population (against a rate of 75, for 1914). Twenty years ago, out of every 100,000 population, under 55 years of age, 30 died of heart disease every year. This has increased until today, the rate is 44 per 100,000 population, under 55 years of age.

What is the reason—that out of a given population of young and middle aged people—3 deaths occur now for every 2 that occurred twenty years ago? This should cause people of active years, to halt occasionally and take stock of their physical condition. If this is done at intervals, and if some abnormality of heart-action is found in time, the activity of the individual can be so restricted as to give a weakened and overworked heart, the best possible chance to recover.

Some one has said that we are living in a day of "tired people", not so much from over-work, but rather from reckless dissipation of nervous energy, associated with wrong methods and habits of living. The vacation time affords a splendid opportunity for rest: rest of body and mind, which will be helpful and aid materially to keep the system in good condition and running order.

The case of cancer is another one of the serious set-backs which we have to acknowledge. We are confronted with a new situation; the reduced mortality at the younger ages of life, preserves a greater number of people to attain the older ages, where the risk of cancer is greater. To improve this condition, the emphasis must rest on early diagnosis and the immediate and skilled treatment of cancer.

Looking back to the beginning of the century, we note with satisfaction, how much the average length of life has been extended in this country, and how much greater a proportion of per-

sons are surviving to maturity and old age. The average length of life, or—as it is often called, the expectation of life at birth, has increased by more than eleven years. The newborn baby of today, may look forward on an average, to sixty years of life. In 1900, his prospect was only 49 years. Life is safer today, and more boys and girls will survive to maturity and old age.

Much still remains to be discovered, but even with our present knowledge, much more can be accomplished.

Attention should be focused on these conditions of middle and late life. When individuals give more attention to remaining well, and seek medical advice regularly, instead of waiting until they are well along the road with some serious, chronic ailment; such as heart disease or cancer, the length of life of the individual and of the people as a whole, will be further lengthened.

Plain Envelopes Again

IN our August issue we had a paragraph explaining that it has not been the policy of the State Board of Health in the past to supply literature or information mailed in plain envelopes in response to an occasional request for such service.

The paragraph brought a letter from one of the editor's most valued friends protesting the policy. Our friend is a distinguished psychiatrist and he made the point that many people, especially young people, are sensitive about such matters. Come to think about it, he is right: our literature and our "personal hygiene service" here is for the purpose of helping the citizens of our State in any and every legitimate way we can. We have always held in strict confidence the personal communications and given each inquirer a confidential answer. We herewith announce that in future we shall be glad to comply with such requests in so far as possible. We shall mail out such replies

to personal letters or literature, when it is requested, in envelopes or packages simply bearing the P. O. box number of the State Board of Health at Raleigh.

Durham's Infant Death Rate

IN our August issue we published the 1934 provisional infant death rate by counties. The figures were given by place of occurrence of death and not by residence of decedent. For nearly all the counties the procedure is fair and accurate. In Durham County, however, on account of a large outside patronage coming to the hospitals there, the county reported last year 234 non-resident births and 40 non-resident infant deaths under one year of age. So, by place of residence the Durham infant death rate for 1934 was about 86 per thousand live births, instead of about 100 charged against it.

It is hardly necessary for us to say that Durham has long maintained a most efficient health department.

Name and Address Important

Again we call attention to the fact that a great many people write to the State Board of Health, requesting literature, much of it desired by return mail, without giving any name or address whatever. Some of them sign their name, but give no address, and the postal cancellation mark is frequently blurred or not on the card at all. It is impossible to reply to such material. Now and then we receive a postal card addressed to the State Board of Health, the reverse side entirely blank. In such case the writer evidently set out to write us for certain information, addressed the card, and then forgot to ask for the information desired.

Again we want to request every one who writes the Board of Health to be sure to see that his name and address is properly on the communication before it leaves his hands.

More Dangerous Disease

PARENTS who are thrown into a paroxysm of fear by the mere mention of "infantile paralysis" would do well to pay heed to statistics recently released by the State Board of Health. The most dangerous enemy, it is revealed, is not always the foe whose approach is heralded with a fanfare of trumpets, as the following figures forcefully indicate:

"A total of 741 cases of diphtheria have thus far this year been reported, with 60 deaths up to September 1st. There have been 9,682 cases of whooping cough, causing 266 deaths. Cases of infantile paralysis have totaled 632 during this period, accompanied by 48 deaths. Be it remembered that infantile paralysis is a warm weather disease and likely to disappear almost entirely during cold weather, while diphtheria and whooping cough in-

crease during cold weather and will not subside until spring. The deaths from diphtheria are little short of inexcusable. One injection of toxoid is sufficient to immunize from 96 to 98 per cent of its recipients.

Thus it would appear that scores of North Carolina children are annually sacrificed needlessly and without great dismay. With the services of city, county and state health departments at their disposal, it is almost unbelievable that careless and neglectful parents should fail to safeguard their progeny against one of the most dreadful of children's diseases. North Carolina has received more than her share of publicity with regards to infantile paralysis. Perhaps it would be well to turn a portion of the spot light in another direction, revealing in its rays a ravager of childhood even more sinister and yet one which could be put to instant flight with ease. — *Charlotte News*.

Ode to Posture

By LILLIAN C. DREW, American Posture League

Good posture is an asset
Which very few possess;
Sad to relate the favored ones
Seem to be growing less.

We see the folks around us
All slumped down in a heap,
And the way that people navigate
Is enough to make you weep.

Some elevate their shoulders,
Some hollow in their backs,
Some stiffen up their muscles,
And some just plain relax.

The one who walks with grace and
poise,
Is a spectacle so rare,
That even down on gay Broadway
The people turn and stare.

If you would cut a figure
In business, sport or school,
Just mind the Posture Precepts,
Obey the Posture Rule.

Don't thrust your head out turtlewise,
Don't hunch your shoulders so;
Don't sag and drag yourself around—
No style to that you know.

Get uplift in your bearing,
And strength and spring and vim;
No matter what your worries,
To slouch won't alter them.

Just square your shoulders to the
world,
You're not the sort to quit;
"It isn't the load that breaks us down,
It's the way we carry it."



LENOIR COUNTY HEALTH DEPARTMENT EXHIBIT AT THE KINSTON FAIR

Dr. Z. V. Moseley, Health Officer of Lenoir County, with his assistants prepared the above excellent exhibit showing their department work for the recent fair held at Kinston. Doctor Moseley exhibited a sample copy of every item of literature the State Board of Health has available for citizens of the State. Their booth attracted a great deal of attention, and much helpful information was disseminated.





